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# WORKBOOK

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FOR

The Psychology of Normal People

BY

C. H. LAWSHE, Jr.

ESTON J. ASHER

JOSEPH TIFFIN

*Purdue University*



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# Preface

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THIS workbook has been prepared for use with *The Psychology of Normal People*, Revised Edition, by Tiffin, Knight, and Asher. The purpose of the workbook is primarily to give the student first-hand acquaintance with certain simple and well-established experimental methods associated with the various topics that are covered in every elementary course in psychology. The experimental projects are designated in each chapter as IVa and IVb. In each case, one project can be used as an outside assignment and the other as a classroom exercise.

In addition to the project assignments, IVa and IVb, there is included in each chapter certain other material that the instructor will find helpful in directing the student's attention to the major points to be emphasized. The additional material consists of

- I. A brief introduction pointing out the application of the projects to the subject matter that is being studied.
- II. One or more collateral-reading references that relate to the subject matter of the assignments.
- III. Terms which have been used in the textbook discussion of the subject. The meaning of these terms should be clear to the student and a certain amount of class time spent on definition and explanation of these terms is frequently desirable.
- IVa and IVb. Detailed instructions for conducting the outside projects and the classroom projects mentioned above.
- V. True-False questions for self-testing drill. These may be used either in class or outside of class, as the instructor decides.
- VI. Optional assignments. These are suggestions for papers to be written on certain phases of the work after the reading of specified material from outside sources. Many instructors may wish to use the optional assignments as a basis for awarding extra credit.

All of the experimental projects have been thoroughly tried in actual classroom situations over a period of several years. In almost every instance, several thousand elementary students have conducted the projects. Those retained and included in this workbook are the ones (a) that really *work* and bring out a principle that should be emphasized, (b) that do not require apparatus, (c) that do not place an undue burden of arithmetic calculations upon the student, and (d) that have been found to arouse a high level of student interest.

The authors feel that an elementary course in psychology should emphasize for the beginning student the fact that modern psychology is a scientific discipline. It is hoped that this workbook will help in attaining this objective.





# Contents

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PREFACE	iii
<i>Chapter 1. WHAT IS PSYCHOLOGY?</i>	3
Introduction	3
Collateral Reading	3
Additional Reading Assignments	3
Terminology	4
Outside Assignment: Judging Personality from Handwriting	5
Class Exercise: Judging Personality from Handwriting	7
Self-Testing Exercise	9
Optional Assignments	10
<i>Chapter 2. DIFFERENCES BETWEEN PEOPLE: HOW THEY AFFECT OUR BEHAVIOR</i>	11
Introduction	11
Collateral Reading	11
Additional Reading Assignments	11
Terminology	12
Outside Assignment: The Nature and Magnitude of Individual Differences	13
Class Exercise: Auditory Memory Span	15
Self-Testing Exercise	17
Optional Assignments	18
<i>Chapter 3. DIFFERENCES IN ENVIRONMENT: HOW THEY AFFECT OUR BEHAVIOR</i>	19
Introduction	19
Collateral Reading	19
Additional Reading Assignments	19
Terminology	20
Outside Assignment: The Influence of Environment on Behavior	21
Class Exercise: The Measurement and Distribution of Individual Differences	23
Self-Testing Exercise	25
Optional Assignments	26
<i>Chapter 4. PERSONALITY AND ADJUSTMENT</i>	27
Introduction	27
Collateral Reading	27
Additional Reading Assignments	27
Terminology	28
Outside Assignment: Patellar-Tendon Reflex	29
Class Exercise: Relative Strength of Motives	31
Self-Testing Exercise	33
Optional Assignments	34
<i>Chapter 5. PERSONALITY: HOW WE JUDGE AND MEASURE IT</i>	35
Introduction	35
Collateral Reading	35

Additional Reading Assignments	35
Terminology	36
Outside Assignment: Graphic Rating Scale	37
Class Exercise: Distribution of Personality Test Scores	39
Self-Testing Exercise	41
Optional Assignments	42
 <i>Chapter 6. INTELLIGENCE: HOW WE ADJUST OURSELVES TO NEW SITUATIONS</i>	 43
Introduction	43
Collateral Reading	43
Additional Reading Assignments	43
Terminology	44
Outside Assignment: The Intelligence of Tennessee Children	45
Class Exercise: The Measurement of Intelligence	47
Self-Testing Exercise	49
Optional Assignments	50
 <i>Chapter 7. ABILITIES, APTITUDES, AND INTERESTS: HOW WE MEASURE THEM</i>	 51
Introduction	51
Collateral Reading	51
Additional Reading Assignments	51
Terminology	52
Class Exercise: Computing Percentile Scores	53
Outside Assignment: Computing Additional Percentile Scores	55
Self-Testing Exercise	57
Optional Assignments	58
 <i>Chapter 8. OUR FEELINGS AND EMOTIONS</i>	 59
Introduction	59
Collateral Reading	59
Additional Reading Assignments	59
Terminology	60
Outside Assignment: Complexes	61
Class Exercise: A Study of Emotions and Memory	63
Self-Testing Exercise	65
Optional Assignments	66
 <i>Chapter 9. ATTENTION: HOW WE DIRECT OUR ENERGIES</i>	 67
Introduction	67
Collateral Reading	67
Additional Reading Assignments	67
Terminology	68
Outside Assignment: The Span of Visual Attention	69
Class Exercise: Effect of Distraction on Attention	71
Self-Testing Exercise	73
Optional Assignments	74
 <i>Chapter 10. LEARNING: HOW WE CHANGE OUR BEHAVIOR</i>	 75
Introduction	75
Collateral Reading	75
Additional Reading Assignments	75
Terminology	76
Outside Assignment: Learning	77
Class Exercise: Meaning in Memory	79
Self-Testing Exercise	81
Optional Assignments	82

<i>Chapter 11. MEMORY: HOW WE RETAIN THE PAST AND ARE INFLUENCED BY IT</i>	83
Introduction	83
Collateral Reading	83
Additional Reading Assignments	83
Terminology	84
Outside Assignment: Memory for Details	85
Class Exercise: Laws of Association	87
Self-Testing Exercise	89
Optional Assignments	90
<i>Chapter 12. PERCEPTION: HOW WE KNOW THE WORLD ABOUT US</i>	91
Introduction	91
Collateral Reading	91
Additional Reading Assignments	91
Terminology	91
Outside Assignment: The Illusion of the Broken Line	93
Class Exercise: Sound Localization	95
Self-Testing Exercise	97
Optional Assignments	98
<i>Chapter 13. IMAGINATION: WHEN AND WHY WE MAKE UP THINGS IN OUR IMAGINATION AND DREAMS</i>	99
Introduction	99
Collateral Reading	99
Additional Reading Assignments	99
Terminology	100
Outside Assignment: Imagination	101
Class Exercise: Individual Differences in Imagination	103
Self-Testing Exercise	105
Optional Assignments	106
<i>Chapter 14. REASONING: HOW WE MAKE, OR SHOULD MAKE, OUR DECISIONS</i>	107
Introduction	107
Collateral Reading	107
Additional Reading Assignments	107
Terminology	108
Outside Assignment: True Reasoning vs. Rationalization	109
Class Exercise: Mental Trial and Error vs. Reasoning	111
Self-Testing Exercise	113
Optional Assignments	114
<i>Chapter 15. SPEAKING, READING, AND WRITING: HOW WE EXPRESS OURSELVES</i>	115
Introduction	115
Collateral Reading	115
Additional Reading Assignments	115
Terminology	116
Outside Assignment: Test of Phonic Ability	117
Class Exercise: A Reading Test	121
Self-Testing Exercise	123
Optional Assignments	124
TABULATION SHEETS	125
PERCENTILE NORM TABULATION SHEETS	131



# **WORKBOOK FOR THE PSYCHOLOGY OF NORMAL PEOPLE**



SEC.

DIV.....SEAT No.....DATE.....NAME.....

# Chapter I

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## What Is Psychology?

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### I. INTRODUCTION

CUSTOM and tradition have given us many habits of judging people which are based on little or no scientific foundation. Among these tendencies is a long-standing belief that certain personality traits are revealed by one's handwriting.

The purposes of the projects in this assignment are (1) to demonstrate how experimental method may be applied to testing the validity of judgments of personality traits made from samples of handwriting, and (2) to determine which personality traits can be judged most accurately from specimens of handwriting, if any of the judgments are found to be more accurate than can be accounted for by chance.

### IIa. COLLATERAL READING

Valentine, W. L., *Experimental Foundations of General Psychology*  
(rev. ed., Farrar and Rinehart, 1941), Chap. 1.

### IIb. ADDITIONAL READING ASSIGNMENTS

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## Chapter I

### III. TERMINOLOGY

Enter below the best synonym or brief definition<sup>1</sup> for each of the following terms:

1. psychology .....
2. experimental .....
3. overt behavior .....
4. objective observation .....
5. subjective observation .....
6. introspection .....
7. siblings .....
8. clinical .....
9. general psychology .....
10. comparative psychology .....
11. genetic psychology .....
12. abnormal psychology .....
13. physiological psychology .....
14. applied psychology .....
15. structuralism .....
16. behaviorism .....
17. Gestalt .....
18. functionalism .....
19. psychoanalysis .....
20. organism .....

<sup>1</sup> If necessary consult one of the following references: English, Horace B., *A Student's Dictionary of Psychological Terms* (4th edition; Harper and Brothers, 1934), or Warren, H. C., *Dictionary of Psychology* (Houghton Mifflin Company, 1934).

SEC.

DIV.....SEAT No.....DATE.....NAME.....

## Chapter 1

### IVa. OUTSIDE ASSIGNMENT: *Judging Personality from Handwriting*

*Directions:* Some people believe that handwriting reveals certain characteristics of personality. The purpose of this assignment is to test this belief experimentally. Study the twelve specimens on the next page and then continue with the instructions below.

Now, rate each sample in terms of intelligence in the spaces below. If you believe the individual to be as intelligent as the highest one third of college students use an *H*, if you believe him to be in the lowest third of college students use an *L*, and if you believe him to be like the average college student in intelligence use an *A*.

1	2	3	4	5	6	7	8	9	10	11	12

Score

(....)

Another personality characteristic is one's tendency to dominate or to be dominated. Use a *D* to indicate those persons who would fall among the most dominant third of the population, an *S* to designate the least dominant or most submissive third, and an *A* to designate the average person, characteristic of the middle one third.

1	2	3	4	5	6	7	8	9	10	11	12

Score

(....)

Can you judge sex from handwriting? Use *M* to designate male and *F* to designate female.

1	2	3	4	5	6	7	8	9	10	11	12

Score

(....)

1. The quick brown fox jumps over
2. The quick brown fox jumps
3. The quick brown fox jumps
4. The quick brown fox
5. The quick brown fox
6. The quick brown fox
7. The quick brown fox
8. The quick brown fox jumps over
9. The quick brown fox jumps over
10. The quick brown fox jumps
11. The quick brown fox jumps
12. The quick brown fox jumps

SEC.

DIV.....SEAT NO.....DATE.....NAME.....

## *Chapter I*

### IVb. CLASS EXERCISE: *Judging Personality from Handwriting*

Your instructor will read the key for the three characteristics in IVa. Record your own score. Scores for the entire class may then be tabulated below.

TABLE I  
INTELLIGENCE

<i>Score</i>	<i>Tabulation</i>
12	
11	
10	
9	
8	
7	
6	
5	
4	
3	
2	
1	
0	

TABLE II  
DOMINANCE

<i>Score</i>	<i>Tabulation</i>
12	
11	
10	
9	
8	
7	
6	
5	
4	
3	
2	
1	
0	

TABLE III  
SEX

<i>Score</i>	<i>Tabulation</i>
12	
11	
10	
9	
8	
7	
6	
5	
4	
3	
2	
1	
0	

<i>Trait</i>	<i>Chance Expectancy</i>	<i>Class Average</i>
Intelligence	4	
Dominance	4	
Sex	6	

## *Chapter 1*

Conclusions:

1. ....
2. ....
3. ....
4. ....
5. ....

SEC.

DIV.....SEAT No.....DATE.....NAME.....

## Chapter 1

### V. SELF-TESTING EXERCISE

Answer each of the questions below by drawing a circle around the *T* if you believe the statement is true and around the *F* if you believe the statement is false.

- |   |   |   |
|---|---|---|
| 1. Psychology is the study of the mind.   | T | F |
| 2. Psychological problems have been the subject of scientific investigation since the earliest times.   | T | F |
| 3. One of the serious limitations of "naïve psychology" is the tendency to make hasty generalizations.  | T | F |
| 4. The scientific psychologist seeks to organize his facts.   | T | F |
| 5. Objective observation in contrast to subjective observation is based upon actual experience.   | T | F |
| 6. In psychology only subjective observations yield dependable data.  | T | F |
| 7. When an experimenter "controls conditions" he isolates one factor for study and keeps other factors from influencing the results.                    | T | F |
| 8. In an ideal experiment only one factor should be varied at a time.   | T | F |
| 9. Statistical analysis is rarely used in psychological research.   | T | F |
| 10. The field of psychology that deals with typical responses of normal healthy adults is called physiological psychology.                              | T | F |
| 11. Genetic psychology is primarily concerned with individual differences.  | T | F |
| 12. The points of view expressed in the various schools of psychology have all contributed to our understanding of human behavior.                      | T | F |
| 13. The "mind-body problem" is a philosophical rather than a psychological one because we have not found a way to investigate it by scientific methods. | T | F |
| 14. Introspection means the inspection of objective psychological data.   | T | F |
| 15. To be scientific, a study must be based upon physical principles.   | T | F |
| 16. Psychology developed from the mother discipline of philosophy.  | T | F |
| 17. The field of psychology that studies similarities and differences in behavior between men and animals is called general psychology.                 | T | F |
| 18. The chief interest of psychoanalysts has been emotional disorders.  | T | F |
| 19. Psychology is closely related to both sociology and physiology.   | T | F |
| 20. The final test of any psychological theory is an appeal to common sense.  | T | F |

## Chapter 1

### VI. OPTIONAL ASSIGNMENTS

1. Summarize, explain, and compare the definitions of psychology given by the following psychologists.

- a. Titchener, E. B., *Textbook of Psychology* (Macmillan Co., 1909), Chap. 1.
- b. Dashiell, J. F., *Fundamentals of General Psychology* (Houghton Mifflin Co., 1937), Chap. 1.
- c. Woodworth, R. S., *Psychology* (4th ed., Henry Holt and Co., 1940), Chap. 1.
- d. Ruch, F. L., *Psychology and Life* (Scott-Foresman and Co., 1941), Chap. 1.
- e. Munn, N. L., *Psychology* (Houghton Mifflin Co., 1946), Chap. 1.

2. Summarize and compare the more commonly found popular conceptions of psychology with the definitions of scientific psychology given above in books *b*, *c*, and *e*.

SEC.

DIV.....SEAT No.....DATE.....NAME.....

## Chapter 2

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### Differences between People: How They Affect Our Behavior

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#### I. INTRODUCTION

PEOPLE differ from each other in all personality traits and characteristics. Many experiments have shown that the individual differences in any group of people are distributed according to certain well-defined principles.

The purposes of the projects for this chapter are (1) to show how a "distribution" of individual differences in a typical trait or characteristic may be constructed, (2) to indicate the approximate form of some typical distributions of individual differences, and (3) to show that the score or standing of a person in any trait can be evaluated properly only in the light of the distributions of the trait among a group of people.

#### IIa. COLLATERAL READING

Garrett, H. E., *Great Experiments in Psychology*

(rev. ed., D. Appleton-Century Co., 1941), Chap. 3, pp. 58-74.

#### IIb. ADDITIONAL READING ASSIGNMENTS

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## Chapter 2

### III. TERMINOLOGY

Enter below the best synonym or brief definition for each of the following terms:

1. individual differences .....
2. conductivity .....
3. maturation .....
4. reading readiness .....
5. adolescence .....
6. adulthood .....
7. endocrine .....
8. hormone .....
9. puberty .....
10. Strong Vocational Interest Test .....
11. disposition .....
12. concept .....
13. sentiment .....
14. complexes .....
15. temperament .....
16. hysteria .....
17. extrovert .....
18. introvert .....
19. ambivert .....
20. drive .....
21. mood .....
22. attitude .....
23. interest .....

SEC.

DIV.....SEAT No.....DATE.....NAME.....

## Chapter 2

### IVa. OUTSIDE ASSIGNMENT: *The Nature and Magnitude of Individual Differences*

Whenever a number of persons are *measured* with regard to any characteristic or aspect of their behavior (such as their height, weight, production on the job, or speed of learning) the measurements will vary over a wide range. A few persons will be at the low end of the scale, a few at the high end, and a larger number in the central range of the scale. This typical distribution of individual differences is found almost invariably, regardless of what trait or characteristic is being measured. Such a distribution is illustrated by the following production records of forty employees engaged on a manual job in the manufacture of hosiery.

TABLE IV  
AVERAGE PRODUCTION FOR A TWO-WEEK PERIOD OF A  
GROUP OF HOSEY MILL EMPLOYEES

Worker	Dozs. of Prs. per Hr.	Worker	Dozs. of Prs. per Hr.	Worker	Dozs. of Prs. per Hr.	Worker	Dozs. of Prs. per Hr.
1	4.2	11	6.8	21	3.5	31	3.6
2	4.1	12	4.8	22	5.9	32	5.4
3	4.9	13	3.7	23	4.7	33	4.6
4	3.6	14	5.5	24	3.4	34	3.8
5	4.4	15	3.7	25	3.0	35	5.2
6	3.8	16	4.4	26	5.0	36	4.7
7	5.0	17	3.9	27	4.4	37	3.2
8	4.5	18	4.7	28	3.2	38	3.3
9	3.8	19	3.1	29	4.0	39	3.4
10	4.2	20	4.1	30	4.2	40	4.3

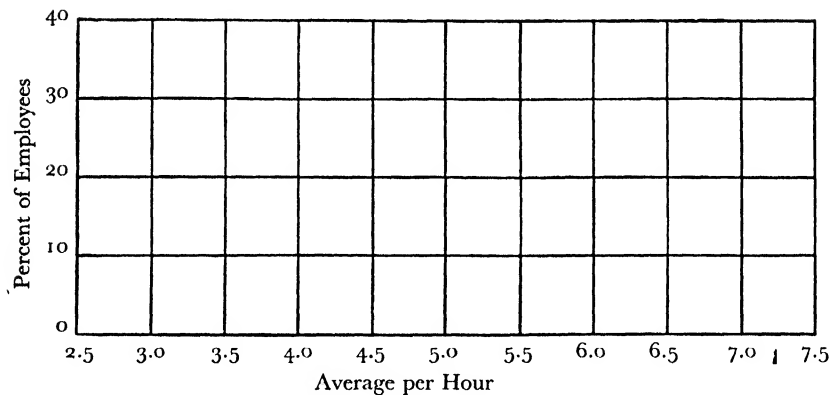
The purpose of this project is to illustrate the preparation of a frequency distribution to show individual differences in a trait or characteristic. A frequency distribution of the production records given above should be constructed as follows:

1. Using Table V, tabulate the number of operators falling in each of the production brackets; e.g., the first employee, with an average production of 4.2 dozens of pairs of hose, would fall in the fourth bracket from the bottom of the table.

2. From the tabulated frequency distribution in Table V, a graphic picture of the results called a frequency polygon may be constructed on the squares below Table V on page 14. In constructing this chart the percentage of employees at each production level (Column 4 in Table V) is plotted above the appropriate production bracket (Column 1 in Table V).

TABLE V  
DISTRIBUTION OF OPERATORS

(1) <i>Production Bracket (Dozens of pairs per hour)</i>	(2) <i>Talley Marks (Put in one for each employee)</i>	(3) <i>Number of Employees (Count the tally marks)</i>	(4) <i>Per Cent of Employees (Divide each number in Column 3 by the total of Column 3)</i>
7.0-7.5			
6.5-6.9			
6.0-6.4			
5.5-5.9			
5.0-5.4			
4.5-4.9			
4.0-4.4			
3.5-3.9			
3.0-3.4			
2.5-2.9			
TOTAL			100



The frequency distribution gives a rapid and accurate graphic picture of the individual differences in production among the group of employees. From an inspection of the distribution, answer the following questions:

1. What is the production of the best employee? .....
2. What is the production of the poorest employee? .....
3. What is the ratio between the production of the best and poorest employee? .....
4. What production level is most common among the group of employees? .....

SEC.

DIV.....SEAT No.....DATE.....NAME.....

## Chapter 2

### IVb. CLASS EXERCISE: *Auditory Memory Span*

This exercise is designed to increase your understanding of the distribution of individual differences by means of a simple memory-span test. Your instructor will give you further instructions.

#### AUDITORY MEMORY-SPAN TEST

*Line*

*Answer*

A .....

B .....

C .....

D .....

E .....

F .....

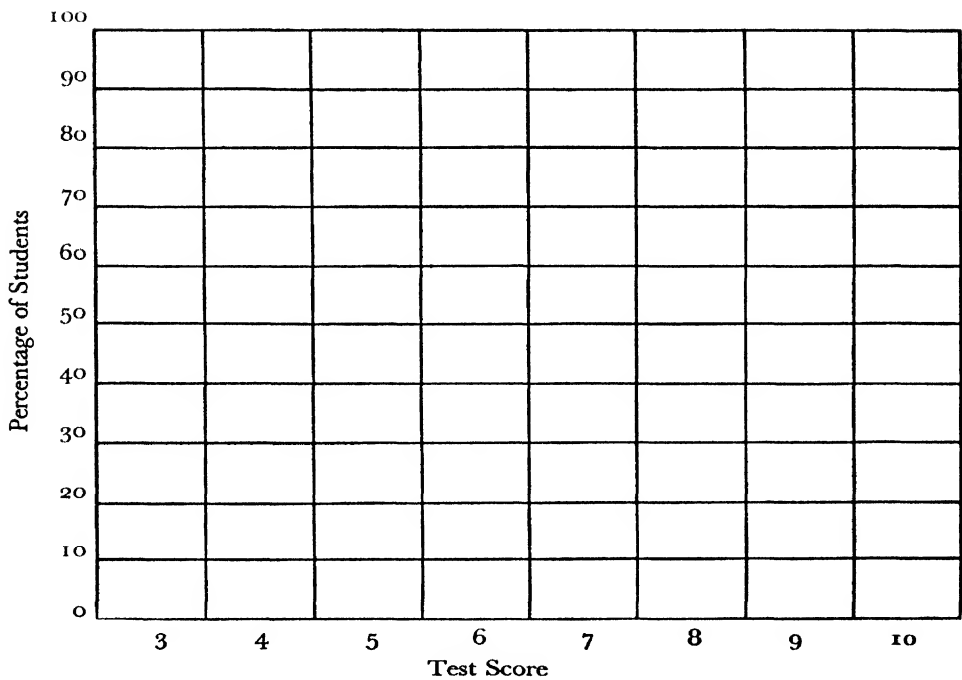
G .....

H .....

Score (No. of digits in longest line correct) ( . . . )

TABLE VI  
DISTRIBUTION OF CLASS SCORES

<i>Score</i>	<i>Tabulation</i>	<i>f</i>	<i>Per Cent</i>
10			
9			
8			
7			
6			
5			
4			
3			
N			100



SEC.

DIV.....SEAT No.....DATE.....NAME.....

## Chapter 2

### V. SELF-TESTING EXERCISE

Answer each of the questions below by drawing a circle around the *T* if you believe the statement is true and around the *F* if you believe the statement is false.

- |  |   |   |
|--|---|---|
| 1. In intelligence and personality traits the majority of people are alike.  | T | F |
| 2. Maturation of the different parts of the body proceeds at varying rates.  | T | F |
| 3. After birth the brain develops in both size and complexity.   | T | F |
| 4. Activities such as reading, writing, and solving arithmetical problems can be learned only when the child has become sufficiently mature. | T | F |
| 5. An individual's ability to learn is, in general, greatest when he is about thirty.  | T | F |
| 6. Friction between a youth and his parents or teacher usually results from the youth's desire for independence.                             | T | F |
| 7. Physiologically and psychologically adolescence is a period of uneven growth.   | T | F |
| 8. One's physique (good or bad "looks," size, physical defects) usually plays an important part in determining personality characteristics.  | T | F |
| 9. Compared with the average boy of twelve, the average girl of twelve is more mature.   | T | F |
| 10. Girls usually excel boys in language ability.  | T | F |
| 11. Boasting and being "high hat" are usually evidence of feelings of inferiority.   | T | F |
| 12. A relatively temporary emotional set is called mood.   | T | F |
| 13. Gallup's poll (of the American Institute of Public Opinion) measures attitudes.  | T | F |
| 14. If we classify people on an introvert-extrovert scale, most people should be classified as extroverts.                                   | T | F |
| 15. Tests for the measurement of interests are available.  | T | F |
| 16. It has been found that in many people moods are cyclic.  | T | F |
| 17. Attitudes influence behavior only in persons of low intelligence or emotional instability.   | T | F |
| 18. Physiological conditions have an effect on various psychological functions.  | T | F |
| 19. All psychological traits develop at the same rate and reach their maxima at the same time.   | T | F |
| 20. Attitudes are usually based on well considered logical reasons.  | T | F |

## Chapter 2

### VI. OPTIONAL ASSIGNMENTS

1. Summarize the work on the effect of training on individual differences reported by Anne Anastasi, *Differential Psychology* (Macmillan Co., 1937), Chap. 6, and by A. I. Gates, "The Nature and Limit of Improvements Due to Training," (27th yearbook, National Society for the Study of Education, 1928, Part I).

2. Summarize the major sex differences in psychological traits discussed by Anne Anastasi, *Differential Psychology* (Macmillan Co., 1937), Chaps. 14 and 15.

# Chapter 3

## Differences in Environment: How They Affect Our Behavior

### I. INTRODUCTION

Boys AND girls do not “grow up” in isolation. They are continually influenced and directed into “good” or “bad” patterns of behavior by their environments, associates, and home situation. Many clinical and case studies of delinquent youth support the statements made above.

The purpose of project IVa in this assignment is to show two specific cases in which environment has been an important factor in causing delinquent behavior in two adolescent boys. The purpose of project IVb is to give a further illustration of the method of tabulating a frequency distribution of individual differences that was covered in the projects for Chapter 2.

### IIa. COLLATERAL READING

Garrett, H. E., *Great Experiments in Psychology*  
(rev. ed., D. Appleton-Century Co., 1941), pp. 74-94.

### IIb. ADDITIONAL READING ASSIGNMENTS

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## *Chapter 3*

### III. TERMINOLOGY

Enter below the best synonym or brief definition for each of the following terms:

1. environment .....
2. psychological whole .....
3. socio-economic level .....
4. prestige .....
5. insecurity .....
6. coefficient of correlation .....
7. attitude .....
8. emotional maturity .....
9. socializing influence .....
10. quantitative .....
11. dominant values .....
12. anti-social .....
13. morals .....
14. free association .....
15. mental development .....

Chapter 3

IVa. OUTSIDE ASSIGNMENT: *The Influence of Environment on Behavior*

On this and the following page are probation reports of two delinquent youths. After you have read each case, list in the spaces provided the environmental influences which you believe might have contributed to delinquency.

CASE 31-406A

Marquis was last in court two years ago charged with burglary. For a long period of time he has been taking part in petty thefts of gasoline and has participated in other burglaries. In company of Jim Bahls, Frank Dios, James Dios, and Alfred Salerio, Marquis took gasoline on four or five occasions from warehouses, tractors, and other places. Some of the gas was used in two cars owned by the boys and some of it was sold for cash. All the boys admitted the burglaries and upon investigation it was learned that thefts of a more serious nature were committed by the same group of boys. A portion of the stolen goods was located in the garage of James Dios. It was definitely decided that the boys were in the business of burglary and petty theft.

Probation officer feels that Marquis cannot be trusted. He is an American boy just past 16 years of age who persistently runs with a group of Mexican youth. The only explanation is that he lives in or near such environment. His home is adequate for his maintenance and his habitual stealing is inexcusable and needs to be stopped. He did not always take an active part in the brothers' stealing but knew about everything and shared to an extent in the stealing. Parents have either been very careless or somewhat negligent in supervision.

Suggested environmental influences:

- 1. ....
- 2. ....
- 3. ....
- 4. ....
- 5. ....
- 6. ....
- 7. ....
- 8. ....

CASE 46-3127B

Amos Beacon was last in court three years ago charged with burglary. In company of Bud Spense, Amos burglarized a residence and confectionary store taking cigarettes, a watch, a razor, and \$10.00 cash. They were apprehended soon afterward and Amos admitted his guilt but Spense denied the charge. It seems the boys were working near the home of the victim and visited his store often. They chose a time when he was away to enter and rob him. Amos entered and picked up the loot and Spense drove by later in his car. They divided the stolen goods, very little being recovered.

First in court eight years ago, accused of taking a bicycle. Reported to Probation Office for a long time. Consistently beyond control of mother. Later he came to court and was released to mother by agreement. Two years later Amos was sent to Bryton Home. Released to join CCC Camp. Very unstable. His attitude has been indifferent since coming from Bryton Home until present time.

He was left on doorstep of the Beacons and later adopted by them. They have reared Amos up to present time with exception of several months spent in Bryton Home. His expenses were paid by parents. The Beacons have one other boy in grammar school. Mr. Beacon is a painter, employed by the County for a number of years.

Suggested environmental influences:

1. ....
2. ....
3. ....
4. ....
5. ....
6. ....
7. ....
8. ....

SEC.

DIV.....SEAT No.....DATE.....NAME.....

## Chapter 3

### IVb. CLASS EXERCISE: *The Measurement and Distribution of Individual Differences*

The instructor will tell you what to do with the following paragraphs.

#### *Start Here*

Extensive research with personnel tests has shown that tests as a supplement to other employment procedures will usually furnish a basis for matching job requirements and employee aptitude to the advantage of both management and employees. Matching of men and jobs often reduces the time and expense of training, and increases the employee's job satisfaction — a result that pays industrial relations dividends in many other ways.

These results may be accomplished because tests quickly supply certain information about the aptitudes, skills, and abilities of employees — information that can be obtained only with great difficulty, if at all, from the interview, application blank, or record of previous employment. Many employment men, who at the beginning of a testing program were cautious and skeptical about the whole idea, have found on the basis of practical experience that tests properly used and interpreted can be extremely valuable tools of the employment manager.

Score (....)

The following table will be completed under the direction of the instructor.

TABLE VII  
TABULATION OF SCORES OF CLASS

(1) <i>Number of Letters Crossed Out</i>	(2) <i>Talley Marks (Put in one for each student)</i>	(3) <i>Number of Students (Count the talley marks)</i>	(4) <i>Per Cent of Students (Divide each number in Column 3 by the total)</i>
95-99			
90-94			
85-89			
80-84			
75-79			
70-74			
65-69			
60-64			
55-59			
50-54			
45-49			
TOTAL			100



SEC.

DIV.....SEAT No.....DATE.....NAME.....

### Chapter 3

#### V. SELF-TESTING EXERCISE

Answer each of the questions below by drawing a circle around the *T* if you believe the statement is true and around the *F* if you believe the statement is false.

- |  |   |   |
|--|---|---|
| 1. Environmental conditions affect intelligence test scores.   | T | F |
| 2. In evaluating the influence of environment upon a given individual it is usually found that persons with identical environments are identical.          | T | F |
| 3. The immediate environment of two persons sitting in the same room conversing is the same.   | T | F |
| 4. Poverty usually influences the personality of a child favorably by making him self-reliant.   | T | F |
| 5. A complete lack of relationship between two sets of data is indicated by a correlation coefficient of $-1.00$ .   | T | F |
| 6. Baker and Traphagen found a correlation of approximately $+ .50$ between economic status and quality of "behavior motivation."                          | T | F |
| 7. Case studies indicate that so long as the parents carefully conceal the facts from the child, friction between parents usually does not hurt the child. | T | F |
| 8. The attitudes of parents are extremely important in determining the attitudes of the child.   | T | F |
| 9. Outward expressions of love for the child by the parent are apt to undermine discipline.  | T | F |
| 10. In disciplining a child it is important to make sure that all rules he is expected to obey are reasonable.   | T | F |
| 11. A parent should not expect more from his child than can be expected from the average child.  | T | F |
| 12. Consistency in the treatment of the child is one of the first rules of child rearing.  | T | F |
| 13. There are fewer divorces among only children than among those who have had brothers or sisters.  | T | F |
| 14. Studies indicate that some children need help in getting established in a group.   | T | F |
| 15. Experimental studies show that the effect of movies on the attitudes of children is temporary, lasting only a matter of days.                          | T | F |
| 16. A child's sleep is usually disturbed after he has been to the movies.  | T | F |

- |  |   |   |
|--|---|---|
| 17. One influence, such as a radio speech, can affect attitudes.   | T | F |
| 18. A study of attitudes of Russian and American children has indicated that men with money are equally respected in both countries. | T | F |
| 19. Studies of crime and delinquency indicate that a large proportion of delinquents are "spoiled" children from wealthy homes.      | T | F |
| 20. Experiments indicate that when a person works with a group, the quality of his work usually improves.                            | T | F |

## VI. OPTIONAL ASSIGNMENTS

1. Summarize the findings on the effect of urban vs. rural environments on mental test performance covered by Anne Anastasi, *Differential Psychology* (Macmillan Co., 1937), Chap. 19.
2. Summarize the findings on effects of cultural differences on racial differences in psychological traits as reported by Anne Anastasi, *Differential Psychology* (Macmillan Co., 1937), Chaps. 16, 17, and 18.

# Chapter 4

## Personality and Adjustment

### I. INTRODUCTION

CHAPTER Four in your textbook tries to answer the following questions: What is personality? What are the characteristics of a personality? How does a knowledge of motives contribute to an understanding of personality? What is adjustment? What is a satisfactory adjustment? How does a knowledge of the nervous system contribute to an understanding of adjustment? In what way does the stimulus-response concept contribute to the prediction and control of behavior? What is meant by the psychological whole? How do psychological wholes differ in complexity?

Your attention is directed in particular to (1) the various kinds of unsatisfactory adjustments described in the chapter, and (2) the fact that behavior should be explained in terms of the whole situation giving rise to it.

### IIa. COLLATERAL READING

Valentine, W. L., *Experimental Foundations of General Psychology*  
(rev. ed., Farrar and Rinehart, 1941), Chaps. 10 and 11.

### IIb. ADDITIONAL READING ASSIGNMENTS

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.....



## *Chapter 4*

### III. TERMINOLOGY

Enter below the best synonym or brief definition for each of the following terms:

1. reflex .....
2. personality .....
3. instinct .....
4. psychological whole .....
5. autonomic nervous system .....
6. stimulus .....
7. maladjustment .....
8. futile adjustment .....
9. thwarting adjustment .....
10. rationalization .....
11. regression .....
12. sensory neurone .....
13. motor neurone .....
14. cerebrum .....
15. motive .....
16. sacral .....
17. character .....

SEC.

DIV.....SEAT No.....DATE.....NAME.....

## Chapter 4

### IVa. OUTSIDE ASSIGNMENT: *Patellar-Tendon Reflex*

In an experiment designed to determine the effect of activity in one part of the body on the extent of the patellar-tendon reflex (knee-jerk), the data shown in Table VIII were obtained. Twenty normal responses were obtained followed by twenty responses obtained while the subject was clinching his fists. An additional twenty responses of each kind were obtained but in the reverse order. Where it is desired to compare two kinds of responses measured in succession, one encounters the possibility that a difference between the two may result from the fact that one of the responses is measured before the other. The first response measured may have an advantage over the second because the person is more interested or has more energy than when the second one is measured. On the other hand the second response has the advantages of practice and familiarity with the task. To control or hold constant these possible sources of a difference between the two kinds of responses, it is customary to measure both responses twice, once in the order AB, and again in the reverse order, BA. This order of measuring responses or presenting stimuli in psychological experiments is known as the *counter-balanced* order.

TABLE VIII  
EXTENT OF THE PATELLAR-TENDON REFLEX  
UNDER TWO CONDITIONS

Trials	Extent of Reflex in Centimeters			
	Normal	Facilitated	Facilitated	Normal
1	4.5	5.0	6.5	3.0
2	3.0	4.5	5.5	4.5
3	3.5	6.0	3.5	5.0
4	5.0	5.5	5.5	3.5
5	4.5	7.0	6.0	4.0
6	4.0	3.5	7.0	5.0
7	3.5	5.0	7.5	4.5
8	6.0	4.0	8.0	3.5
9	4.5	5.5	4.5	4.5
10	5.5	6.5	4.0	4.0
11	2.0	6.0	6.5	3.5
12	2.5	7.0	7.0	5.5
13	4.0	4.5	3.5	6.0
14	3.0	7.5	7.0	3.5
15	3.5	4.0	6.5	4.5
16	4.0	5.0	6.0	4.0
17	4.0	6.5	5.0	3.5
18	5.0	6.0	5.0	3.0
19	3.5	4.5	5.5	5.0
20	4.5	5.5	6.0	4.0

Answer the following questions regarding the results of this experiment:

1. What was the object of the experiment? .....

.....  
.....

2. What is the average amount of the normal reflex? .....

3. What is the average amount of the facilitated reflex? .....

.....  
4. Is there any evidence of fatigue or practice from the first to the last twenty normal responses? Compare averages. ....  
.....

5. Which is more variable, the normal or facilitated responses? To answer this question, calculate the *average deviation* of the forty normal and the forty facilitated responses separately. Subtract each number from the average, add the resulting differences disregarding signs, and divide by forty. ....  
.....

6. What conclusions can be drawn from the results of this experiment? .....

.....  
.....

SEC.

DIV.....SEAT No.....DATE.....NAME.....

## Chapter 4

### IVb. CLASS EXERCISE: *Relative Strength of Motives*

Your instructor will tell you what to do with the following tables:

TABLE IX  
FORM FOR RATING MOTIVES<sup>1</sup>

<i>Motives</i>	<i>Rating</i>	<i>Motives</i>	<i>Rating</i>
Appetite-Hunger		Hospitality	
Health		Sex Attraction	
Parental Affection		Ambition	
Pleasure		Respect for Deity	
Bodily Comfort		Possession	
Approval by Others		Sympathy for Others	
Personal Appearance		Safety	
Cleanliness		Rest-Sleep	
Home Comfort		Devotion to Others	
Social Distinction		Efficiency	
Competition		Coöperation	

<sup>1</sup> From M. M. White and D. S. White, *Experiments in Beginning Psychology*, (John S. Swift Co., Inc., 1936).

**TABLE X**  
**NUMBER OF RATINGS ASSIGNED TO EACH MOTIVE**

<i>Motives</i>	<i>Ratings</i>										Total	Average
	1	2	3	4	5	6	7	8	9	10		
Appetite-Hunger												
Health												
Parental Affection												
Pleasure												
Bodily Comfort												
Approval by Others												
Personal Appearance												
Cleanliness												
Home Comfort												
Social Distinction												
Competition												
Hospitality												
Sex Attraction												
Ambition												
Respect for Deity												
Possession												
Sympathy for Others												
Safety												
Rest-Sleep												
Devotion to Others												
Efficiency												
Coöperation												

SEC.

DIV.....SEAT No.....DATE.....NAME.....

## Chapter 4

### V. SELF-TESTING EXERCISE

Answer each of the questions below by drawing a circle around the *T* if you believe the statement is true and around the *F* if you believe the statement is false.

- |  |   |   |
|--|---|---|
| 1. Neural impulses are transmitted to nerve centers along motor neurones.  | T | F |
| 2. A single neural pathway is never active by itself.  | T | F |
| 3. The same stimulus may inhibit or re-enforce the knee-jerk depending upon the time interval between it and the tap on the patellar tendon.                         | T | F |
| 4. Intelligent adjustments not only remove immediate tensions; they make it more difficult for us to attain future needs and purposes.                               | T | F |
| 5. The organism and the environment are the constituents of the psychological whole.   | T | F |
| 6. The standards of right and wrong by which we judge character are the same for all people and for all times.   | T | F |
| 7. The relatively simple response involving a sense organ, a central nervous connection, and a motor organ is called a psychological whole.                          | T | F |
| 8. Justifying an act or opinion by excuses displayed in the guise of reasons is a kind of self-deception which stunts one's growth and development.                  | T | F |
| 9. Compromise adjustments involve the acceptance of a substitute for the goal for which one is actually striving.  | T | F |
| 10. Contradictory forms of behavior may be brought about by the same motive.   | T | F |
| 11. A knowledge of an individual's motivation is a prime prerequisite for understanding his personality and adjustment.  | T | F |
| 12. All behavior is a part of the process of adjustment of living organisms to their environments.   | T | F |
| 13. The notion that personality is the immediate impression made by an individual upon others is too limited a use of the term for the psychologist.                 | T | F |
| 14. A daydream is a thwarting adjustment to the extent that it is a substitute for overt accomplishment which might, in the absence of the daydream, be forthcoming. | T | F |
| 15. The importance of the nervous system in adjustment is seen in the fact that man is always wanting something and doing something about his wants.                 | T | F |

- |   |   |   |
|---|---|---|
| 16. One's personality is not affected by the degree of intelligent behavior manifested.   | T | F |
| 17. Many involuntary reflexes may be affected by conscious processes.   | T | F |
| 18. Degeneration of the nervous system apparently does not carry with it any pronounced effect upon behavior.                     | T | F |
| 19. Adjustments are either satisfactory or unsatisfactory; there is no in-between condition.                                      | T | F |
| 20. Futile or thwarting adjustments involve acts that either fail to resolve tension or do so at the price of future development. | T | F |

## VI. OPTIONAL ASSIGNMENTS

1. Summarize and explain the several varieties of adjustive behavior discussed by L. F. Shaffer, *The Psychology of Adjustment* (Houghton Mifflin Co., 1936), Chaps. 6-10.
2. Give a specific example of each of the kinds of adjustive behavior mentioned by L. F. Shaffer in Chaps. 6 and 7 of the book mentioned in assignment 1 above.

# Chapter 5

## Personality: How We Judge and Measure It

### I. INTRODUCTION

THIS CHAPTER discusses the various means that are used in measuring personality and personality traits. It is important to distinguish between popular but unreliable methods, common-sense methods, and scientific methods of measuring personality. A knowledge of the sources of error in attempts to estimate personality characteristics will go a long way toward increasing the reliability of our everyday judgments of our associates. A knowledge of the scientific methods, of how they are developed, and how they are used should indicate that there is no short-cut, easy, fool-proof method of obtaining reliable and valid measures of personality. In one of the exercises in this chapter you are provided with an opportunity to discover how one goes about developing a rating scale for obtaining systematic judgments of certain personality characteristics.

### IIa. COLLATERAL READING

Valentine, W. L., *Experimental Foundations of General Psychology*  
(rev. ed., Farrar and Rinehart, 1941), Chap. 2.  
Garrett, H. E., *Great Experiments in Psychology*  
(rev. ed., D. Appleton-Century Co., 1941), Chap. 4.

### IIb. ADDITIONAL READING ASSIGNMENTS

.....

.....

.....

.....

.....



## Chapter 5

### III. TERMINOLOGY

Enter below the best synonym or brief definition for each of the following terms:

1. split personality .....
2. phrenology .....
3. physiognomy .....
4. stigmata .....
5. chiromnomy .....
6. projective techniques .....
7. halo effect .....
8. normal distribution .....
9. rating scale .....
10. paired comparison method .....
11. the error of the pigeonhole .....
12. graphology .....
13. personality quotient .....
14. mesomorphy .....
15. introversion .....
16. components of temperament .....
17. ascendance-submission .....
18. free-association test .....

SEC.

DIV.....SEAT No.....DATE.....NAME.....

## Chapter 5

### IVa. OUTSIDE ASSIGNMENT: *Graphic Rating Scale*

Suppose that you are an employment manager for a life insurance company. You wish to obtain ratings on a number of personality traits on men who apply for the job of insurance salesman. Construct a graphic rating scale for obtaining such ratings using the forms given below and proceeding as follows:

1. Ask each of five of your friends to give you a list of five personality traits which he thinks are most important for success in selling life insurance. Write the traits in each list in the spaces below. In the spaces headed "summary list," write the five traits which appear most frequently in the five lists. In obtaining each list it is important to avoid giving your friend any suggestions or letting him see any other list of traits.

*List 1*

*List 2*

*List 3*

.....	.....	.....
.....	.....	.....
.....	.....	.....
.....	.....	.....
.....	.....	.....

*List 4*

*List 5*

*Summary List*

.....	.....	.....
.....	.....	.....
.....	.....	.....
.....	.....	.....
.....	.....	.....

2. List the five traits from the summary list in the graphic rating form on the next page as trait 1, trait 2, etc.

3. After each trait, write a brief descriptive statement to indicate what is meant by the trait name.

4. Under the horizontal scale for each trait, write a very brief phrase or statement to describe each of five degrees or amounts of the trait (see the sample rating scale on page 166 of your textbook). Let the extreme right end of the scale represent the highest degree of the trait, the left end the lowest degree of the trait, and the positions in between, intermediate degrees of the trait.

5. Repeat this procedure for each of the remaining traits.

6. Under "directions to the rater" at the top of your rating scale, write a clear, concise statement of just how the person using the scale is to proceed in rating a specific individual.

### GRAPHIC RATING SCALE

*Directions to the Rater:*

Trait 1.



Trait 2.



Trait 3.



Trait 4.



Trait 5.



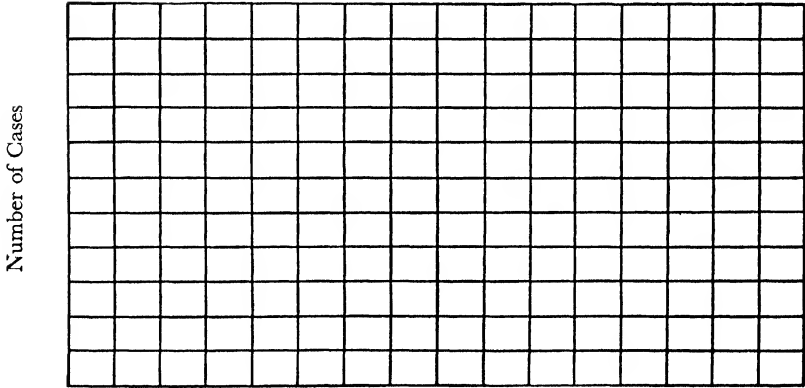
Chapter 5

IVb. CLASS EXERCISE: *Distribution of Personality Test Scores*

We know from repeated measurements that most people are about average in various psychological traits — that only the exceptional individual is at one extreme or the other. Yet it is a common mistake in dealing with personality, to classify people as coöperative or uncoöperative, aggressive or submissive, agreeable or disagreeable. To show that personality traits approximate normal distribution (see page 164 in your textbook), plot on the form below the scores earned by college students on a personality test. Use the scores in Table XI.

TABLE XI  
THE SCORES OF 508 COLLEGE STUDENTS  
ON THE COÖPERATIVENESS COMPONENT  
OF THE GUILFORD-MARTIN  
PERSONNEL INVENTORY I

<i>Scores in Class- Intervals</i>	<i>Number of Cases</i>	<i>Scores in Class- Intervals</i>	<i>Number of Cases</i>
95-99	2	55-59	65
90-94	8	50-54	60
85-89	11	45-49	44
80-84	27	40-44	32
75-79	39	35-39	26
70-74	49	30-34	10
65-69	53	25-29	11
60-64	68	20-24	3



1. What per cent of the 508 college students have scores between 50 and 69? .....

2. Compare this per cent with the percentage of very coöperative individuals (scores of 85 and above) and with the percentage of very uncoöperative individuals (scores of 30 and below).

3. What conclusion can be drawn from these data (graph and figures in questions 1 and 2)?

SEC.

Div.....SEAT No.....DATE.....NAME.....

## Chapter 5

### V. SELF-TESTING EXERCISE

Answer each of the questions below by drawing a circle around the *T* if you believe the statement is true and around the *F* if you believe the statement is false.

- |   |   |   |
|---|---|---|
| 1. To classify individuals into personality types as cheerful and gloomy, ascendant and submissive, or introvert and extrovert, is to commit the error of the pigeonhole.                                 | T | F |
| 2. The viscerotonic is described as an introvert, a poor mixer, and a recluse.  | T | F |
| 3. Self-ratings are, in general, more reliable than ratings by others.  | T | F |
| 4. Adequate self-appraisal is a prerequisite for changing personality.  | T | F |
| 5. The tendency to falsify in answering personality questionnaires is so pronounced that in some recent questionnaires certain allowances are made in computing the final results to cover this tendency. | T | F |
| 6. It is poor psychology to describe an individual's personality without reference to the situation in which it manifests itself.   | T | F |
| 7. In personality testing, identical scores generally mean identical personalities.   | T | F |
| 8. If an individual is dishonest in one situation, it is safe to conclude that he will be dishonest in other situations.  | T | F |
| 9. Letters of recommendation and letters of application are scientific methods of judging personality.  | T | F |
| 10. The "halo effect" in judging personality is the tendency to apply to an individual the judgments previously formed of his group.  | T | F |
| 11. Studies of the relation between physique and temperament of normal people have not yielded clear-cut, positive results.   | T | F |
| 12. Sheldon's endomorph as a physical type corresponds to Kretschmer's asthenic type.   | T | F |
| 13. Chirognomists attempt to judge character by an examination of the shape of the skull.   | T | F |
| 14. The "halo effect" in judging personality is found only in self-ratings.   | T | F |
| 15. Extroversion is a more desirable trait than introversion.   | T | F |
| 16. In responding to ink blots, an individual reveals significant facts regarding his personality without knowing that he is doing so and without knowing just what he is revealing.                      | T | F |

- |  |   |   |
|--|---|---|
| 17. Physiognomists assume a relationship between personality traits and such physical characteristics as concavity and convexity of profile, texture of the skin, and the shape of the face. | T | F |
| 18. A measure of introversion and extroversion in a large number of people would reveal that most people are about equally introverted and extroverted.                                      | T | F |
| 19. Rating scales yield most reliable results when the degrees indicated for each trait are between three and seven.   | T | F |
| 20. Most personality questionnaires yield only one score, a score which is an over-all measure of personality.   | T | F |

## VI. OPTIONAL ASSIGNMENTS

1. Summarize the major evidence which shows the fallacy in each of the following methods of judging personality:

physiognomy  
phrenology  
palmistry  
astrology  
graphology

The following readings will be found helpful for this assignment:

- a. Griffith, C. R., *General Introduction to Psychology* (Macmillan Co., 1928), Chap. 18.
  - b. Valentine, W. L., *Experimental Foundations of General Psychology* (Farrar and Rinehart, 1941), Chap. 2.
  - c. Laird, D. A., *The Psychology of Selecting Employees*, 3rd ed., McGraw-Hill Book Co., 1937), Chap. 8.
2. Summarize the various methods of measuring or evaluating personality traits discussed by L. F. Shaffer, *The Psychology of Adjustment* (Houghton Mifflin Co., 1936), Chap. 11.

# Chapter 6

## Intelligence: How We Adjust Ourselves to New Situations

### I. INTRODUCTION

THE WORD “intelligence” as used in this chapter is identified with intelligent behavior. A person is intelligent to the extent that he acts in an intelligent manner. Intelligent behavior depends upon alertness, ability to assimilate and retain, fertile imagination, insight, ability to criticize self, confidence, and strong motivation. You should avoid the common mistake of thinking of intelligence as a power or entity, or as a fixed, unchangeable something. The measurement of intelligence, the reliability and validity of intelligence tests, and the factors which affect measurements of intelligence are discussed in relation to the practical problem of predicting an individual’s performances in various life situations. Your attention is directed in particular to the discussion of the influence of environment upon intelligence test scores.

### IIa. COLLATERAL READING

Valentine, W. L., *Experimental Foundations of General Psychology*  
(rev. ed., Farrar and Rinehart, 1941), Chaps. 6 and 7.

### IIb. ADDITIONAL READING ASSIGNMENTS

.....

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.....



## Chapter 6

### III. TERMINOLOGY

Enter below the best synonym or brief definition for each of the following terms:

1. assimilation .....
2. insight .....
3. motivation .....
4. mental age (M. A.) .....
5. intelligence quotient (I. Q.) .....
6. retardation .....
7. performance test .....
8. group test .....
9. individual test .....
10. percentile score .....
11. genius .....
12. feeble-minded .....
13. moron .....
14. idiot .....
15. imbecile .....
16. validity .....
17. reliability .....
18. siblings .....
19. fraternal twins .....
20. identical twins .....

SEC.

DIV.....SEAT No.....DATE.....NAME.....

## Chapter 6

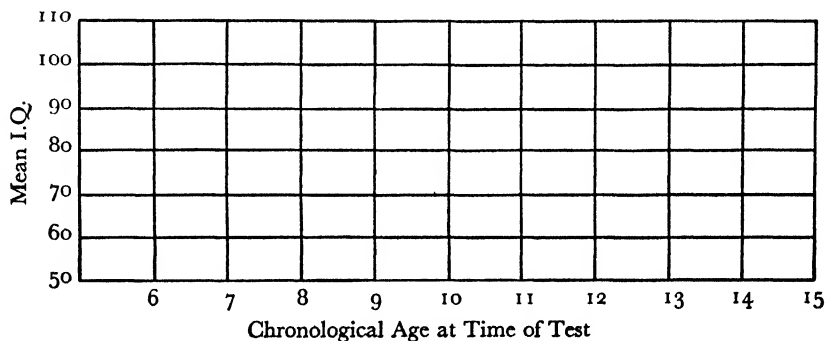
### IVa. OUTSIDE ASSIGNMENT: *The Intelligence of Tennessee Children*

TABLE XII  
AVERAGE I.Q.'S OF VARIOUS AGE GROUPS OF WHITE  
AND COLORED TENNESSEE CHILDREN<sup>1</sup>

Age Range in Years and Months		White	Negro	Age Range in Years and Months		White	Negro
From	To			From	To		
6-0	6-3	95	88	10-6	10-9	88	74
6-3	6-6	94	81	10-9	11-0	86	71
6-6	6-9	96	86	11-0	11-3	85	72
6-9	7-0	93	85	11-3	11-6	83	73
7-0	7-3	91	80	11-6	11-9	84	71
7-3	7-6	89	82	11-9	12-0	83	67
7-6	7-9	90	78	12-0	12-3	84	70
7-9	8-0	88	79	12-3	12-6	85	72
8-0	8-3	90	81	12-6	12-9	83	70
8-3	8-6	89	74	12-9	13-0	85	70
8-6	8-9	89	80	13-0	13-3	83	67
8-9	9-0	89	79	13-3	13-6	86	70
9-0	9-3	90	76	13-6	13-9	79	73
9-3	9-6	86	72	13-9	14-0	84	69
9-6	10-0	89	77	14-0	14-3	79	65
10-0	10-3	84	68	14-3	14-6	77	69
10-3	10-6	87	78	14-6	14-9	80	64
				14-9	15-0	79	67

<sup>1</sup> Adapted by permission from Alphonse Chapanis and W. C. Williams, "Results of a Mental Survey with the Kuhlmann-Anderson Intelligence Tests in Williamson County, Tennessee," *Journal of Genetic Psychology*, 1945 (LXVII), 27-55.

Using the data in Table XII construct a graph on the grid below. Use pen or black pencil for white children and red pencil for Negro children.



What conclusions may be drawn from your graph?

1. ....
2. ....
3. ....
4. ....
5. ....

What inferences may be drawn from the graph?

1. ....
2. ....
3. ....
4. ....
5. ....

Div.....SEAT No.....DATE.....NAME.....

## Chapter 6

IVb. CLASS EXERCISE: *The Measurement of Intelligence*

Your instructor will give you a short intelligence test in class. Use the following form to tabulate the scores of the class.

TABLE XIII

[illegible]

Class Average (Mean) (....)



SEC.

Div.....SEAT No.....DATE.....NAME.....

## Chapter 6

### V. SELF-TESTING EXERCISE

Answer each of the questions below by drawing a circle around the *T* if you believe the statement is true and around the *F* if you believe the statement is false.

- |   |   |   |
|---|---|---|
| 1. Intelligence is the innate power that governs one's achievement.   | T | F |
| 2. Motivation varies with level of intelligence.  | T | F |
| 3. Some types of work can be done best by persons of inferior intelligence.   | T | F |
| 4. Mental age is unrelated to chronological age.  | T | F |
| 5. The I. Q. is as applicable to adults as it is to children.   | T | F |
| 6. Most performance tests are group tests.  | T | F |
| 7. A person's percentile score indicates his relative position in a particular group.   | T | F |
| 8. Approximately 20% of an unselected population is below an I. Q. level of 90.   | T | F |
| 9. The application of the word "genius" is restricted to extremely intelligent individuals.   | T | F |
| 10. Intelligence test scores are useful in predicting college success.  | T | F |
| 11. Generally speaking, the higher the educational attainment of adults, the higher the intelligence test score.                                    | T | F |
| 12. Intelligence tests can predict accurately for children as young as two and three.   | T | F |
| 13. Intelligence test scores made at different times seldom vary for a given individual.  | T | F |
| 14. When siblings are separated and placed in homes of different socio-economic levels they tend to become as unlike as randomly selected children. | T | F |
| 15. Intelligence is an innate capacity and is little influenced by environment.   | T | F |
| 16. Children who live in superior homes tend to become more intelligent while those in inferior homes tend to become less intelligent.              | T | F |
| 17. Intellectual potentiality in contrast to delivered power can be measured successfully.  | T | F |
| 18. Hereditary factors exert so strong an influence on development that environmental factors are relatively unimportant.                           | T | F |
| 19. Both euthehic and eugenic programs can result in race progress.   | T | F |
| 20. A test is valid when it yields approximately the same results each time it is given.  | T | F |

## Chapter 6

### VI. OPTIONAL ASSIGNMENTS

1. Summarize the history and development of the Binet Scale as covered by H. E. Garrett, *Great Experiments in Psychology* (rev. ed., D. Appleton-Century Co., 1941), Chap. 1, and by E. B. Greene, *Measurements of Human Behavior* (Odyssey Press, 1941), Chap. 10.

2. Evaluate the experimental evidence on the effect of heredity and environment on differences in intelligence as summarized by Anne Anastasi, *Differential Psychology* (Macmillan Co., 1937), Chaps. 2 and 3.

# Chapter 7

## Abilities, Aptitudes, and Interests: How We Measure Them

### I. INTRODUCTION

THIS chapter is concerned with the measurement of those aspects of behavior which are closely identified with vocational and educational guidance. You will find it worth your while to make a list of the various tests of ability, aptitude, and interest which are described in this chapter, and after each to indicate the kind of behavior which is measured, or the occupations and vocations involving the kinds of behavior measured by each test. Your attention is directed in particular to (1) the distinction between ability and aptitude, (2) the interpretation of test scores, and (3) the construction and use of psychographs.

### IIa. COLLATERAL READING

Valentine, W. L., *Experimental Foundations of General Psychology*  
(rev. ed., Farrar and Rinehart, 1941), Chap. 3.

### IIb. ADDITIONAL READING ASSIGNMENTS

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## Chapter 7

### III. TERMINOLOGY

Enter below the best synonym or brief definition for each of the following terms:

1. achievement test .....
2. trade test .....
3. oral trade questions .....
4. motor abilities .....
5. dynamometer .....
6. motor coördination .....
7. finger dexterity .....
8. mechanical ability .....
9. clerical ability .....
10. musical ability .....
11. artistic ability .....
12. aptitude .....
13. interest .....
14. psychological profile .....
15. norms .....

SEC.

DIV.....SEAT No.....DATE.....NAME.....

## Chapter 7

### IVa. CLASS EXERCISE: *Computing Percentile Scores*

Below are the scores made by 1275 college students on the Auditory Memory Span Test which you took earlier.

TABLE XIV

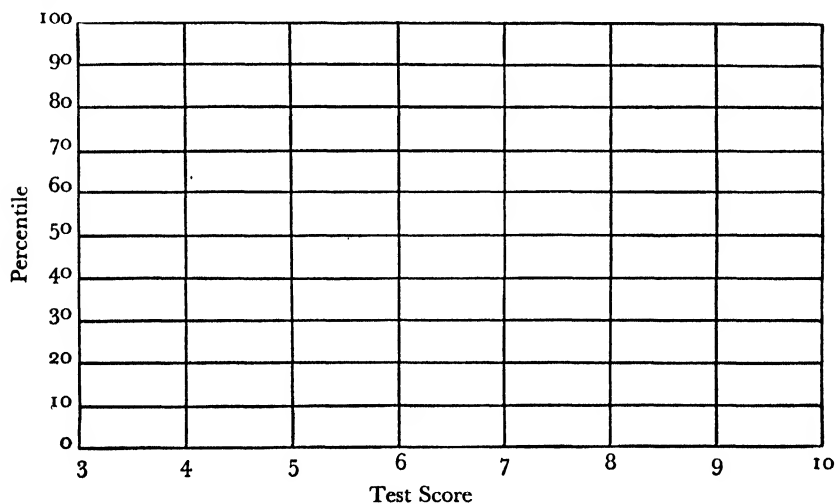
Score	f	cf	Percentile
10	25		
9	127		
8	109		
7	221		
6	195		
5	54		
4	11		
3	1		

Under the direction of your instructor compute the percentile values. What was your raw score? (.....) What was your percentile score? (.....) What does this mean?

.....

.....

In the space provided below draw the percentile curve based upon the above data.



How does a frequency polygon differ from a percentile curve? .....

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Div.....SEAT No.....DATE.....NAME.....

## Chapter 7

IVb. OUTSIDE ASSIGNMENT: *Computing Additional Percentile Scores*

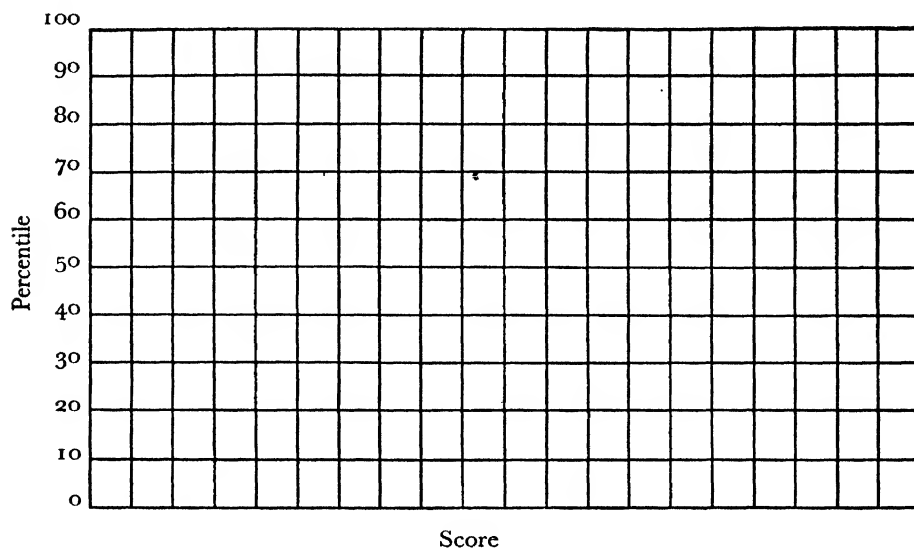
Using the data you used in Chapter 5 or other data your instructor will supply you, compute percentile scores in the table below.

TABLE XV

[illegible]

2 6 3 4 8

Using the material from the preceding page, construct a percentile curve below.



SEC.

DIV.....SEAT No.....DATE.....NAME.....

## Chapter 7

### V. SELF-TESTING EXERCISE

Answer each of the questions below by drawing a circle around the *T* if you believe the statement is true and around the *F* if you believe the statement is false.

- |  |   |   |
|--|---|---|
| 1. A trade test is one that measures an individual's excellence in a specific job or occupation.   | T | F |
| 2. Trade tests are always of the paper and pencil variety.   | T | F |
| 3. Motor skill tests are not truly psychological tests.  | T | F |
| 4. Speed of movement is the most important factor in adding numbers.   | T | F |
| 5. Simple motor processes are sometimes quite important in routine types of jobs.  | T | F |
| 6. Mechanical assembly tests are essentially dexterity tests.  | T | F |
| 7. The best mechanical comprehension test, other things being equal, identifies the most intelligent people.   | T | F |
| 8. A typing test is a trade test.  | T | F |
| 9. Successful performance on the Seashore Musical Talent Tests is fair assurance of musical success.   | T | F |
| 10. An aptitude is an innate quality or capacity.  | T | F |
| 11. An arithmetic test may sometimes be used as an aptitude test.  | T | F |
| 12. Aptitude tests for predicting success in the engineering professions have not yet been developed.  | T | F |
| 13. Success or pleasure in connection with an activity usually results in increased interest.  | T | F |
| 14. A number of psychological instruments for measuring interest are available.  | T | F |
| 15. All tests, paper and pencil as well as performance, yield pictures of behavior.  | T | F |
| 16. A psychograph presents a graphic picture of an individual's test performance.  | T | F |
| 17. An aptitude and an ability are the same thing.   | T | F |
| 18. One who is able and willing to direct his attention toward a given problem manifests interest in that problem.   | T | F |
| 19. Most modern tests are sufficiently fool-proof so that proper interpretation of scores can be made without knowledge of the development or standardization of the test in question. | T | F |
| 20. A test yields a longitudinal picture of behavior.  | T | F |

## Chapter 7

### VI. OPTIONAL ASSIGNMENTS

1. Summarize the use of mechanical and manipulation tests for employee placement in industry as discussed by Joseph Tiffin, *Industrial Psychology* (Prentice Hall Co., 1942), Chaps. 3 and 4.

2. Describe the methods of measuring interests as discussed by W. V. Bingham, *Aptitudes and Aptitude Testing* (Harper and Bros., 1937), Chaps. 6 and 7, and by E. B. Greene, *Measurements of Human Behavior* (Odyssey Press, 1941), Chap. 15.

# Chapter 8

## Our Feelings and Emotions

### I. INTRODUCTION

AN EMOTIONAL reaction is a disturbed condition of the organism brought about by the prospect of some value's being gained or lost, and involving also an impulse to act. Emotions arise from internal conditions, external conditions, and one's previous experiences. The outward manifestations of an emotion change as one matures. These changes are brought about primarily by learning.

Emotions may be detected by observing facial expressions, changes in the voice, or other overt expressions, and by measuring such bodily changes as blood pressure, breathing, and electrical resistance of the skin. Your attention is directed in particular to (1) emotional development, (2) detection of emotion, (3) satisfactory and unsatisfactory emotional adjustments, and (4) control of emotions.

### IIa. COLLATERAL READING

Valentine, W. L., *Experimental Foundations of General Psychology*  
(rev. ed., Farrar and Rinehart, 1941), Chaps. 12 and 13.  
Garrett, H. E., *Great Experiments in Psychology*  
(rev. ed., D. Appleton-Century Co., 1941), Chap. 12.

### IIb. ADDITIONAL READING ASSIGNMENTS

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## Chapter 8

### III. TERMINOLOGY

Enter below the best synonym or brief definition for each of the following terms:

1. emotion .....
2. adrenalin .....
3. psychogalvanic reflex .....
4. phobia .....
5. startle pattern .....
6. lie-detector .....
7. critical words .....
8. complex .....
9. complex indicator .....
10. conditioned emotional responses .....
11. maturation .....
12. pneumograph .....
13. James-Lange theory .....
14. law of effect .....
15. repression .....
16. emotional maturity .....
17. plethysmograph .....
18. sphygmomanometer .....

Chapter 8

IVa. OUTSIDE ASSIGNMENT: *Complexes*

1. Make a list of the “complex indicators” given on page 286 of your textbook. When you are thoroughly familiar with these indicators, give the following word-association test (the stimulus words for this test will be furnished by your instructor) to two subjects, one male and one female, who have had no chance to see the words. Ask each subject to respond as quickly as possible with the first word that comes to mind when the stimulus word is given. Record the subject’s response words in the spaces indicated. In giving the test be on the lookout for complex indicators.

<i>Stimulus Words</i>	<i>Response Words</i>	
(To be provided by the instructor)	Subject 1	Subject 2
1. ....	.....	.....
2. ....	.....	.....
3. ....	.....	.....
4. ....	.....	.....
5. ....	.....	.....
6. ....	.....	.....
7. ....	.....	.....
8. ....	.....	.....
9. ....	.....	.....
10. ....	.....	.....
11. ....	.....	.....
12. ....	.....	.....
13. ....	.....	.....
14. ....	.....	.....
15. ....	.....	.....
16. ....	.....	.....
17. ....	.....	.....
18. ....	.....	.....
19. ....	.....	.....
20. ....	.....	.....

2. List below the stimulus words for which you find some indication of a complex for Subject 1. After each word list the complex indicator or indicators which appeared with each word.

<i>Word</i>	<i>Indicators</i>
1. ....	.....
2. ....	.....
3. ....	.....
4. ....	.....
5. ....	.....
6. ....	.....
7. ....	.....
8. ....	.....

Write here a brief statement regarding the nature of the subject's complex (if any).

3. Repeat step No. 2 for the second subject.

<i>Word</i>	<i>Indicators</i>
1. ....	.....
2. ....	.....
3. ....	.....
4. ....	.....
5. ....	.....
6. ....	.....
7. ....	.....
8. ....	.....

Describe the nature of this subject's complex (if any).

SEC.

DIV.....SEAT No.....DATE.....NAME.....

## Chapter 8

### IVa. CLASS EXERCISE: *A Study of Emotions and Memory*

Your instructor will give you instructions regarding the use of the following record form:

TABLE XVI

INDIVIDUAL RECORD FORM FOR STUDY OF EMOTIONS AND MEMORY

	<i>Responses</i>	<i>Ratings</i>
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		

What per cent of your responses are marked P? ..... U? ..... I?.....

TABLE XVII

PER CENT OF RESPONSES MARKED P, U, AND I

(Class Results)

<i>Per Cent</i>	<i>P</i>	<i>U</i>	<i>I</i>
90-100			
80-89			
70-79			
60-69			
50-59			
40-49			
30-39			
20-29			
10-19			
0-9			
Averages			



SEC.

DIV.....SEAT No.....DATE.....NAME.....

## Chapter 8

### V. SELF-TESTING EXERCISE

Answer each of the questions below by drawing a circle around the *T* if you believe the statement is true and around the *F* if you believe the statement is false.

- |   |   |   |
|---|---|---|
| 1. The repetition of the stimulus word in a word-association test is one indication of a complex.   | T | F |
| 2. According to the James-Lange theory of emotion, bodily changes occur before the individual experiences an emotion.                         | T | F |
| 3. The difference between infantile and adult emotions is due in part to maturation.  | T | F |
| 4. An accurate record of heart action is not necessarily a precise measure of emotional behavior.   | T | F |
| 5. In order to rid one's self of internal emotional tensions, it is only necessary to suppress the overt evidences of the emotions.           | T | F |
| 6. There is really no facial expression typical of any specific emotional reaction.   | T | F |
| 7. It is possible to interpret accurately the significance of the emotions of another person by studying his overt behavior.                  | T | F |
| 8. A "critical" word in a word-association test never gives rise to more than one "complex indicator" at any one time.                        | T | F |
| 9. The cranial segment of the autonomic nervous system is directly responsible for the emergency nature of emotional reactions.               | T | F |
| 10. A person's most characteristic way of acting is manifested when he is confronted with some emergency.                                     | T | F |
| 11. Among stimuli which cause emotional reactions in infants are furry objects, toads, lizards, snakes, and mice.                             | T | F |
| 12. An individual's voice is more indicative of his emotional state than is his facial expression or his bodily activity.                     | T | F |
| 13. Pleasant experiences are, in general, remembered longer and more accurately than unpleasant ones.   | T | F |
| 14. Watson's contention that fear, rage, and love constitute the emotional equipment of the newborn has been verified by other investigators. | T | F |
| 15. Different adults in the throes of the same emotion do not show it in the same way.  | T | F |
| 16. Most people think better under strong emotional excitement.   | T | F |
| 17. Each emotion has its distinctive organic state.   | T | F |
| 18. External indications of anger may occur in the absence of the emotion itself.   | T | F |

19. According to Bridges, all emotional reactions develop out of the generalized emotional state of excitement which is present at birth.

T      F

20. One explanation of the emotional immaturity of some individuals is found in the tendency to repeat pleasant and eliminate unpleasant experiences.

T      F

## VI. OPTIONAL ASSIGNMENTS

1. Summarize the investigations dealing with the development of emotional behavior as described by N. L. Munn, *Psychological Development* (Houghton Mifflin Co., 1938), Chap. 14.

2. Summarize and discuss the basic experiments on physiological changes in emotions. This work is presented by H. E. Garrett, *Great Experiments in Psychology* (rev. ed., D. Appleton-Century Co., 1941), Chap. 12 and by J. F. Dashiell, *Fundamentals of General Psychology* (Houghton Mifflin Co., 1937), Chap. 7.

# Chapter 9

## Attention: How We Direct Our Energies

### I. INTRODUCTION

SEVERAL specific principles that determine the *span of attention* have been formulated from experiments conducted in this field. Among these experiments are several which have been conducted with a *tachistoscope*. Project IVa in this assignment shows the application of this experimental technique to the measurement of the span of visual attention.

Another topic in the field of attention that has been studied by experimental methods is the effect of distraction on work performed. Project IVb is designed to illustrate the application of an experimental method to this problem.

### IIa. COLLATERAL READING

Dashiell, J. F., *Fundamentals of General Psychology*  
(Houghton Mifflin Co., 1937), Chap. 12.

### IIb. ADDITIONAL READING ASSIGNMENTS

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## Chapter 9

### III. TERMINOLOGY

Enter below the best synonym or brief definition for each of the following terms:

1. attention .....
2. motor adjustments .....
3. sensory discrimination .....
4. intensity .....
5. novelty .....
6. native .....
7. involuntary attention .....
8. voluntary attention .....
9. distraction .....
10. tachistoscope .....
11. eye-movement camera .....
12. eye-movement .....
13. span of attention .....
14. fixation .....

SEC.

DIV.....SEAT No.....DATE.....NAME.....

## Chapter 9

### IVa. OUTSIDE ASSIGNMENT: *The Span of Visual Attention*

Numerous experiments have shown that the amount of material presented is one of the factors determining the span of attention. In general, if the amount of material presented is too small, the limit of the span of attention is not reached. But if the amount of material presented is too great, confusion is created and the amount of material actually brought into attention is reduced.

Experiments of this type are often performed with a *tachistoscope*, an instrument which presents material for a very brief interval (often only one tenth of a second). After the exposure, the subject records what he saw.

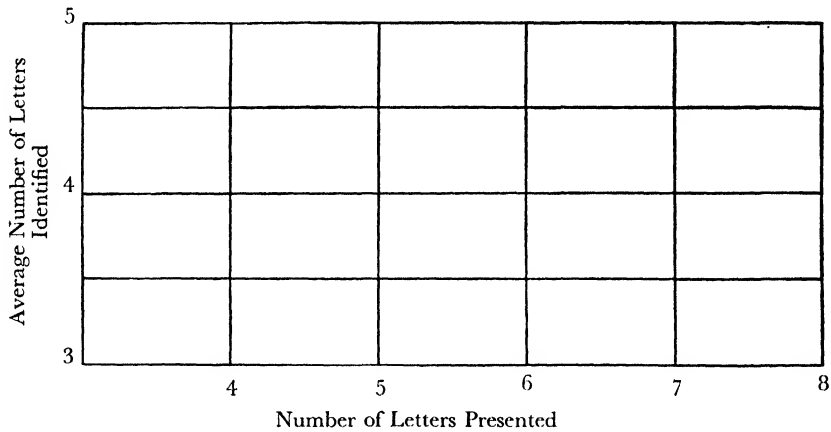
With this instrument, a series of exposures of nonsense letters was made. Each of the first five exposures contained 4 letters; the next five, 5 letters; and so on until each of the last five exposures contained 8 letters. The results obtained with ten randomly selected subjects are tabulated below.

TABLE XVIII

AVERAGE NUMBER OF LETTERS RECOGNIZED WHEN DIFFERENT NUMBERS  
WERE PRESENTED (5 trials at group)

Subject	4 Letters Presented	5 Letters Presented	6 Letters Presented	7 Letters Presented	8 Letters Presented
1	4.0	5.0	3.8	4.8	4.0
2	4.0	4.8	3.2	3.0	2.8
3	4.0	4.8	4.8	4.6	5.0
4	4.0	4.0	3.0	3.4	2.2
5	3.6	4.8	4.6	3.8	3.8
6	3.8	5.0	4.6	5.0	4.2
7	4.0	5.0	4.0	3.0	3.2
8	4.0	5.0	4.2	3.6	3.6
9	4.0	4.8	3.4	4.4	5.0
10	4.0	5.0	5.0	5.6	5.6
Sum					
$\frac{\text{Sum}}{10} = \text{Average}$					

From the results shown in Table XVIII, plot the curve below. Plot the number of letters presented along the baseline (horizontal axis), and the average number of letters recognized on the vertical axis.



Questions:

1. What number of letters resulted in the largest average number of letters recognized?

.....

2. Since words, particularly short words, are seen as a whole, what ordinarily should be the maximum number of words in the headlines of a magazine advertisement? .....

3. Look at ten full-page advertisements in any standard weekly magazine (such as the *Saturday Evening Post* or *Colliers*). What is the average number of words appearing on the headlines of the ten advertisements? .....

SEC.

DIV.....SEAT No.....DATE.....NAME.....

## Chapter 9

### IVb. CLASS EXERCISE: *Effect of Distraction on Attention*

The instructor will tell you what to do with the material below:

A	B	C	D
46297	70347	64792	91743
58743	62827	85347	45728
84632	32271	68236	70172
20987	84792	62789	48297
26498	54436	20984	23346
86629	19432	48926	26234
48286	72427	42826	42724
17587	90593	41785	35395
23172	23389	60271	28983
60249	82431	32942	32134
14428	53421	71824	90124
24638	24689	84836	27986
36247	32265	63742	84652
65246	74298	47642	61892
50260	62248	26620	80482
66179	80173	66971	26371
62249	16266	56942	47626
88298	48421	63892	23124
49261	27250	94162	72520
52638	94739	25836	93937
63263	37262	36362	67622
74427	76272	47724	63272
64251	39264	46152	49462
29144	27421	92441	72124
43254	34255	23452	81525
54296	98694	86692	34496
72265	24252	17625	87522
71743	78532	27347	42235
68253	43267	45523	89627
32281	18129	34182	43921
Scores			

SCORES WITH DISTRACTION

Column B .....

Column C .....

Distraction score = .....

SCORES WITHOUT DISTRACTION

Column A .....

Column D .....

No distraction score = .....

TABLE XIX  
SUMMARY OF CLASS SCORES

Without Distraction (Columns A and D)			With Distraction (Columns B and C)		
Scores	(1) N	(2) Nx Scores	Scores	(3) N	(4) Nx Scores
56-60			56-60		
51-55			51-55		
46-50			46-50		
41-45			41-45		
36-40			36-40		
31-35			31-35		
26-30			26-30		
21-25			21-25		
16-20			16-20		
11-15			11-15		
6-10			6-10		
Totals			Totals		

$$\text{No Distraction Average} = \frac{\text{Sum of Column (2)}}{\text{Sum of Column (1)}} = \dots\dots$$

$$\text{Distraction Average} = \frac{\text{Sum of Column (4)}}{\text{Sum of Column (3)}} = \dots\dots$$

Questions:

1. What is the effect of distraction on the attentive process used in adding numbers?

2. In the experiment, why were the exercises given in the following order: no distraction, distraction, distraction, no distraction?

3. Why is the above order better than giving two exercises with "no distraction" first, and then giving two exercises with "distraction"?

SEC.

DIV.....SEAT No.....DATE.....NAME.....

## Chapter 9

### V. SELF-TESTING EXERCISE

Answer each of the questions below by drawing a circle around the *T* if you believe the statement is true and around the *F* if you believe the statement is false.

- |   |   |   |
|---|---|---|
| 1. Attention is a function found in man but not in lower forms of life.   | T | F |
| 2. Blind persons or hypnotized persons can sometimes distinguish between two slightly different sounds which seem alike to a normal person. | T | F |
| 3. Attention is mental and does not involve bodily adjustments.   | T | F |
| 4. Compared with memory of things attended to only casually, our memory of things attended to closely will be more accurate.                | T | F |
| 5. Size, novelty, repetition, and intensity are external conditions of attention.   | T | F |
| 6. Normally we attend to only one thing at a time.  | T | F |
| 7. Other things being equal, the stronger of two competing stimuli will ordinarily gain attention.  | T | F |
| 8. An intermittent sound is ordinarily more distracting than a steady sound.  | T | F |
| 9. Attention is determined by both internal and external factors.   | T | F |
| 10. Attitude, needs, and mood are internal factors determining attention.   | T | F |
| 11. The principal difference between voluntary and involuntary attention is that involuntary attention is effortless.                       | T | F |
| 12. Large signs and loud noises are more effective in attracting attention than in holding attention.                                       | T | F |
| 13. Conditions are most likely to distract one if they are different from what one is accustomed to.  | T | F |
| 14. To become negatively adapted to a stimulus means to learn not to respond to it.   | T | F |
| 15. One becomes negatively adapted to something more quickly when he assumes toward it an attitude of indifference.                         | T | F |
| 16. Distraction decreases output or requires extra effort.  | T | F |
| 17. Learning a skill (such as skating) takes place most rapidly when someone shows one what to attend to.                                   | T | F |
| 18. Attention-getting power is only one of the important factors in an advertisement.   | T | F |
| 19. A simple object will usually hold the attention for only a short time.  | T | F |
| 20. The number of objects one can take in at a glance is of importance to advertisers.  | T | F |

## Chapter 9

### VI. OPTIONAL ASSIGNMENTS

1. Summarize some of the basic methods and results in the study of attention in advertising. This material is covered by H. W. Hepner, *Psychology in Modern Business* (Prentice Hall Co., 1938), Chap. 19.

2. Summarize the main facts regarding attention as reported by R. S. Woodworth, *Experimental Psychology* (Henry Holt and Co., 1938), Chap. 27.

# Chapter 10

## Learning: How We Change Our Behavior

### I. INTRODUCTION

THIS CHAPTER is concerned with those modifications of behavior that result from activity. The changes which occur when we learn include conditioning, coördination and integration, and negative adaptation. These changes in behavior occur to the extent that the organism is motivated in a situation which calls for a response which the organism does not have. Motivation is therefore a basic factor in all learning. Some ways of learning are more economical than others. For example, spaced periods of practice are more economical than unspaced periods.

Topics which should receive special attention include (1) methods of breaking habits, (2) economical learning, (3) learning by trial and error and by insight.

### IIa. COLLATERAL READING

Valentine, W. L., *Experimental Foundations of General Psychology*  
(rev. ed., Farrar and Rinehart, 1941), Chaps. 5, 14, and 15.  
Garrett, H. E., *Great Experiments in Psychology*  
(rev. ed., D. Appleton-Century Co., 1941), Chaps. 5, 7, 8, and 9.

### IIb. ADDITIONAL READING ASSIGNMENTS

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## Chapter 10

### III. TERMINOLOGY

Enter below the best synonym or brief definition for each of the following terms:

1. negative adaptation .....
2. integration .....
3. conditioning .....
4. conditioned stimulus .....
5. unconditioned stimulus .....
6. insight .....
7. habit .....
8. theory of identical elements .....
9. negative transfer .....
10. experimental extinction .....
11. intrinsic motive .....
12. extrinsic motive .....
13. plateaus .....
14. overlearning .....
15. cul de sac .....
16. learning .....
17. empathy .....
18. nervous habits .....
19. motor learning .....

SEC.

DIV.....SEAT No.....DATE.....NAME.....

## Chapter 10

### IVa. OUTSIDE ASSIGNMENT: *Learning*

1. Recite the alphabet forward as quickly as possible. Time yourself with a watch with a second hand. Do this for twelve trials in succession and record your results in Table XX.

TABLE XX  
TIME FOR RECITING THE  
ALPHABET FORWARD

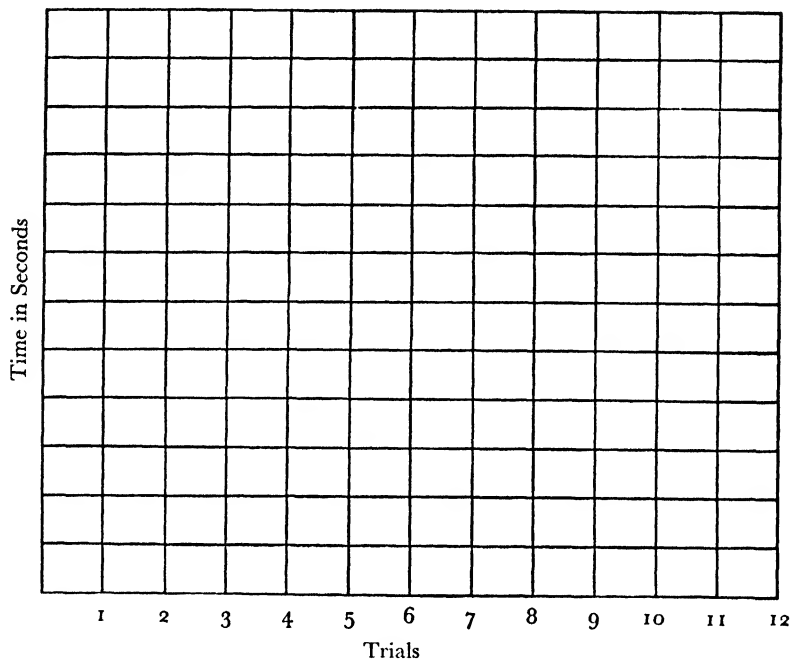
<i>Trials</i>	<i>Time in Seconds</i>	<i>Trials</i>	<i>Time in Seconds</i>
1		7	
2		8	
3		9	
4		10	
5		11	
6		12	

TABLE XXI  
TIME FOR RECITING THE  
ALPHABET BACKWARD

<i>Trials</i>	<i>Time in Seconds</i>	<i>Trials</i>	<i>Time in Seconds</i>
1		7	
2		8	
3		9	
4		10	
5		11	
6		12	

2. Now recite the alphabet backward as quickly as possible. Do this for twelve trials. After each trial record the time required in Table XXI.

3. Plot the data in Tables XX and XXI on the chart below. Use a solid line for one set of data and a broken line for the other.



4. Explain the differences in these curves.

SEC.

DIV.....SEAT No.....DATE.....NAME.....

## Chapter 10

### IVb. CLASS EXERCISE: *Meaning in Memory*

Your instructor will give you the necessary directions for this exercise.

LIST A

LIST B

.....

.....

.....

.....

.....

.....

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.....

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.....

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.....

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.....

.....

Number correct ( .....)

(.....)

PERCENTAGE OF CLASS RECALLING ....

(.....)

(.....)

Conclusion: .....  
.....  
.....  
.....  
.....

SEC.

DIV.....SEAT No.....DATE.....NAME.....

## Chapter 10

### V. SELF-TESTING EXERCISE

Answer each of the questions below by drawing a circle around the *T* if you believe the statement is true and around the *F* if you believe the statement is false.

- |  |   |   |
|--|---|---|
| 1. The advantage of recitation over reading is greater in learning nonsense material than in learning meaningful material.   | T | F |
| 2. One reading a day for ten consecutive days goes further towards the complete learning of a long poem than ten readings at a single sitting.   | T | F |
| 3. An example of negative adaptation is seen in the fact that an individual loses his fear of airplane riding after taking several rides without an accident.  | T | F |
| 4. Fewer repetitions are required in learning if part of the learning time is spent in reciting than if all the time is spent in reading.  | T | F |
| 5. The originally effective stimulus for a given response is known as the conditioned stimulus.  | T | F |
| 6. A response which is elicited by a stimulus which was originally inadequate to produce it is an unlearned response.  | T | F |
| 7. Only a few human reactions can be conditioned.  | T | F |
| 8. Conditioning can be accomplished most easily if the conditioned stimulus follows the unconditioned stimulus at a long interval.   | T | F |
| 9. Experimental extinction results from the repetition of the conditioned stimulus without the unconditioned stimulus.   | T | F |
| 10. Some responses appear and some changes in behavior occur as a consequence of maturation.   | T | F |
| 11. Continued repetition of a performance necessarily makes it perfect in speed, ease, or adaptation to the task at hand.  | T | F |
| 12. That repetition may extinguish a response to a stimulus is seen in negative adaptation.  | T | F |
| 13. We do not know just what physiological changes occur when we learn.  | T | F |
| 14. Rest periods in learning are valuable because they give us time to assimilate what has been learned.   | T | F |
| 15. The advantage of meaning and broad relationships is likely to be lost in learning things as wholes.  | T | F |
| 16. In one experiment it was found that two weeks of training at the end of a given period of maturity was as effective for developing stair-climbing ability as six weeks of training at an earlier period of maturity. | T | F |

- |  |   |   |
|--|---|---|
| 17. According to one theory, learning results in a reduction in the resistance between the neurones constituting the nervous arcs which are said to be involved in all activity. | T | F |
| 18. One of the best ways to break a habit is to develop a counter habit.   | T | F |
| 19. Young children and mentally defective children require more trials on the average for conditioning than older children and normal children.                                  | T | F |
| 20. In Mateer's experiment on conditioning children to make a swallowing response to a blindfold, the blindfold was the unconditioned stimulus.                                  | T | F |

## VI. OPTIONAL ASSIGNMENTS

1. What concept of transfer of training has developed from the original work of Thorndike and Woodworth and how has this work affected the modern school curriculum? See H. E. Garrett, *Great Experiments in Psychology* (rev. ed., D. Appleton-Century Co., 1941), Chap. 9, and S. L. Pressey, *Psychology and the New Education* (Harper and Bros., 1933), Chap. 15.

2. Describe the conditioned reflex technique and show how the principle behind it has been used as an explanation of learning. See H. E. Garrett, *Great Experiments in Psychology* (rev. ed., D. Appleton-Century Co., 1941), Chap. 5, and J. F. Dashiell, *Fundamentals of General Psychology* (Houghton Mifflin Co., 1937), Chap. 14.

# Chapter 11

## Memory: How We Retain the Past and Are Influenced by It

### I. INTRODUCTION

THIS CHAPTER is concerned with the questions of how we memorize or learn, how we retain what is learned, and how we reinstate — recall or recognize — what has been learned and retained. Related questions include: Do we completely forget anything? What factors influence recall? What is the rôle of emotion in recall? How does recall differ from recognition? Can memory be improved? In what way are the laws of association involved in learning and recall?

The outside assignment and the class exercise described below seek to show (1) how reports of things seen or heard are distorted in being passed from one person to another, and (2) how the laws of association influence learning and recall.

### IIa. COLLATERAL READING

Valentine, W. L., *Experimental Foundations of General Psychology*  
(rev. ed., Farrar and Rinehart, 1941), Chap. 18.

### IIb. ADDITIONAL READING ASSIGNMENTS

.....  
.....  
.....  
.....  
.....  
.....



## *Chapter 11*

### III. TERMINOLOGY

Enter below the best synonym or brief definition for each of the following terms:

1. organic memory .....
2. conscious memory .....
3. recall .....
4. recognition .....
5. after-image .....
6. conscious present .....
7. memory after-image .....
8. memory image .....
9. imagination .....
10. concentration .....
11. retentiveness .....
12. retention .....
13. irrational .....
14. somnambulism .....
15. psychoanalysis .....
16. inhibition .....
17. amnesia .....
18. deterioration .....
19. association .....
20. retroactive .....
21. delirium .....

SEC.

DIV.....SEAT No.....DATE.....NAME.....

## Chapter 11

### IVa. OUTSIDE ASSIGNMENT: *Memory for Details*

*Directions:* Select eight or ten fellow students as subjects and instruct your first subject to read the following news item carefully twice. After fifteen minutes ask him to write the paragraph from memory, *urging him to recall as many of the facts as he can*. Present his written reproduction (without any corrections) to a second subject, and instruct him to read it carefully twice. After fifteen minutes have him write the paragraph from memory. Present the second subject's reproduction to a third subject, and so on until all eight or ten persons have been tested. Be sure that no subject except the first sees the original paragraph; each of the other subjects should see only the paragraph as written from memory by the preceding subject.

#### BANDITS STAGE DARING DAYLIGHT HOLDUP

Four masked men entered the Booneville Aluminum Works during the noon hour today and escaped with \$38,450 in cash and securities. The daring daylight holdup is the third in a series of robberies that have occurred in this city during the present month. The police refuse to make a statement, but it is rumored that the bandits are the same gang that recently shot and killed a bank clerk during a daylight holdup in Luverne. On that occasion five men drove up in a black Buick car; one man remained in the car while the others entered the bank. The clerk saw the man coming and set off the alarm. In the gun battle that ensued the clerk was fatally wounded by a shot that lodged in the neck. In today's holdup no one saw the bandits except a clerk who was working late and was just leaving for lunch when the bandits entered.

Analyze the writings and tabulate the number of errors in the table on the back of this sheet. Cite one or two illustrations of each type of error. Evaluation should always be done in terms of the *printed* paragraph.

TABLE XXII

<i>Errors</i>	<i>Writings</i>									
	1	2	3	4	5	6	7	8	9	10
Of omission Examples:										
Of insertion Examples:										
Of transposition of time and place Examples:										
Of substitution Examples:										
Totals										

SEC.  
 DIV.....SEAT No.....DATE.....NAME.....

## *Chapter II*

IVb. CLASS EXERCISE: *Laws of Association*

TABLE XXIII  
 INDIVIDUAL RECORD FORM  
 (To be filled in according to directions)

1. ....	11. ....
2. ....	12. ....
3. ....	13. ....
4. ....	14. ....
5. ....	15. ....
6. ....	16. ....
7. ....	17. ....
8. ....	18. ....
9. ....	19. ....
10. ....	20. ....

TABLE XXIV  
NUMBER OF INDIVIDUALS RECALLING EACH ITEM

<i>Item</i>	<i>Frequency</i>	<i>Per Cent</i>
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		
11.		
12.		
13.		
14.		
15.		
16.		
17.		
18.		
19.		
20.		

List below the five items with the highest frequencies. After each indicate the law of association that favored the recall of the item.

<i>Item</i>	<i>Law</i>
1. ....	.....
2. ....	.....
3. ....	.....
4. ....	.....
5. ....	.....

SEC.

DIV.....SEAT No.....DATE.....NAME.....

## Chapter 11

### V. SELF-TESTING EXERCISE

Answer each of the questions below by drawing a circle around the *T* if you believe the statement is true and around the *F* if you believe the statement is false.

- |  |   |   |
|--|---|---|
| 1. Retention is the essential feature of memory.   | T | F |
| 2. According to Freud, dreams are wish-fulfilling.   | T | F |
| 3. When once learned, nonsense material is remembered longer than meaningful material.   | T | F |
| 4. Most psychologists agree that nothing is completely forgotten.  | T | F |
| 5. Hypnotism has been used successfully to recover "lost memories."  | T | F |
| 6. Ideas do not become associated in our thinking unless they are related.   | T | F |
| 7. The needs of the moment are quite important as determiners of what we recall.   | T | F |
| 8. Painful experiences are usually more easily recalled than pleasant experiences.   | T | F |
| 9. An attitude of confidence is a practical aid in recalling names in everyday activities.                                     | T | F |
| 10. Continued repetition is the best method of making sure one will remember a name.   | T | F |
| 11. Most persons' memories of ordinary occurrences are often inaccurate.   | T | F |
| 12. In simple recall there is a great tendency to simplify the facts.  | T | F |
| 13. Amnesia is a disorder involving inability to recall.   | T | F |
| 14. A feeling of familiarity in a strange place is called retroactive amnesia.   | T | F |
| 15. Organization of material to be remembered into meaningful patterns improves memory.  | T | F |
| 16. Most forgetting proceeds rapidly at first and then becomes more and more rapid.  | T | F |
| 17. When an acquaintance misstates the facts about an occurrence which you witnessed, it is a clear case of lying on his part. | T | F |
| 18. In studying a lesson, overlearning is a waste of time.   | T | F |
| 19. The avoidance of the recall of disagreeable or painful experiences is known as repression.                                 | T | F |
| 20. In answering a multiple-choice question, recall is unnecessary.  | T | F |

## Chapter 11

### VI. OPTIONAL ASSIGNMENTS

1. Summarize and discuss Ebbinghaus' studies in memory and forgetting. See H. E. Garrett, *Great Experiments in Psychology* (D. Appleton-Century Co., 1941), Chap. 10.
2. Contrast recall under direct suggestion and under hypnosis. See C. L. Hull, *Hypnosis and Suggestibility* (D. Appleton-Century Co., 1933), Chap. 5.

SEC.

DIV.....SEAT No.....DATE.....NAME.....

## Chapter 12

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### Perception: How We Know the World about Us

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#### I. INTRODUCTION

THE FIELD of perception was one of the first fields of psychology to be thoroughly studied by experimental methods. Normal visual illusions and sound localization are two perceptual problems that have been quite thoroughly examined.

The purpose of the projects included with this assignment is to show the application of experimental method to two specific problems in the field of perception.

#### IIa. COLLATERAL READING

Valentine, W. L., *Experimental Foundations of General Psychology*

(rev. ed., Farrar and Rinehart, 1941), Chap. 15.

Garrett, H. E., *Great Experiments in Psychology*

(rev. ed., D. Appleton-Century Co., 1941), Chap. 13.

#### IIb. ADDITIONAL READING ASSIGNMENTS

.....  
.....  
.....

#### III. TERMINOLOGY

Enter below the best synonym or brief definition for each of the following terms:

1. sensation .....
2. olfactory .....
3. kinaesthetic .....
4. static .....



5. cutaneous	.....
6. audiometer	.....
7. decibel (db)	.....
8. perimeter	.....
9. color-blind	.....
10. visual field	.....
11. localization	.....
12. optic nerve	.....
13. tunnel vision	.....
14. Weber's Law	.....
15. psychophysics	.....
16. sensory adaptation	.....
17. two-point limen	.....
18. reaction time	.....
19. sensory fatigue	.....
20. spectroscope	.....
21. phi phenomenon	.....
22. retinal lag	.....
23. convergence	.....
24. retinal disparity	.....
25. accomodation	.....
26. parallax	.....
27. suggestion	.....
28. illusion	.....
29. extra-sensory perception	.....
30. synaesthesia	.....

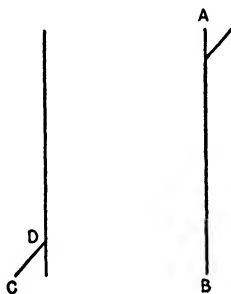
SEC.

DIV.....SEAT No.....DATE.....NAME.....

## Chapter 12

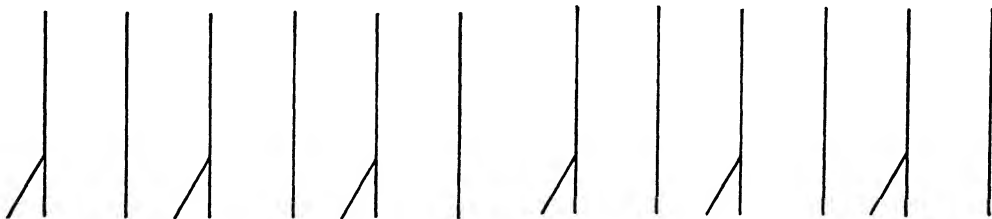
### IVa. OUTSIDE ASSIGNMENT: *The Illusion of the Broken Line*

A visual illusion that has been studied extensively is one known as the "illusion of the broken line." This illusion, like all normal illusions, is experienced by everyone. You may see for yourself that you experience the illusion if you look at the diagram below, and place a small mark on the vertical line AB where it seems to you that the small line CD would strike line AB if the small line were extended across the blank area in the center. Do not use a ruler, but place the mark where you would judge the small line to strike the line AB.



After you have made the mark, place a ruler on the line CD. You will find that the two short lines shown in the diagram are actually parts of the same straight line. Everyone, however, perceives the extended line CD as striking line AB too low.

Ask six people to mark the right-hand line in each of the diagrams below at the point where they think the small line would strike. After each subject has made his mark, cover the marked drawing so the next subject will not be influenced by the previous subject's judgment.



Questions:

1. How many of the six subjects placed the mark too low? (.....)
- How many too high? (.....)

2. After you know that you “see” the point of intersection too low, can you see it where it really belongs? (.....)

If not, what does this indicate about a normal visual illusion? .....

.....

3. In order to have the short lines *look* as if they were a continuation of the same line, where would the upper small line have to be drawn? .....

SEC.

DIV.....SEAT No.....DATE.....NAME.....

## Chapter 12

### IVb. CLASS EXERCISE: *Sound Localization*

Under certain conditions, a person with normal hearing can "localize" a sound with surprising accuracy, even though he cannot see the source of the sound. Under certain other conditions, extremely large errors may be made in an attempt to localize a sound. The purpose of this experiment is to identify two of the conditions which affect the accuracy of sound localization and to determine which of the two factors results in the more accurate localization of sounds.

The two conditions to be studied are (1) the location of the sound in the median plane (a vertical plane which cuts at right angles and at the midpoint a line through the head connecting the two ears), and (2) the location of the sound in the horizontal plane (a horizontal plane passing through the two ears).

A student with normal hearing should be blindfolded and asked to sit in a straight-backed chair before the class. The instructor then makes a series of noises (as by clicking two coins together) in the several positions indicated in the table below. After each click, the blindfolded student gives a judgment as to where he thinks the sound is located. In conducting the experiment, the experimenter should be careful not to reveal the position of the sound by faint shadows which may be seen through the blindfold or by a rustling of clothes while the sound source is being placed in position. The locations of the several sound stimuli should be in random order. Before the experiment the subject should be told that the sound will always be in one of seven positions; namely, front, upper front, upper, upper back, back, left, or right.

TABLE XXV  
LOCATION OF SOUND STIMULUS

<i>Stimuli</i>	(1) <i>Front</i>	(2) <i>Upper Front</i>	(3) <i>Upper</i>	(4) <i>Upper Back</i>	(5) <i>Back</i>	(6) <i>Left</i>	(7) <i>Right</i>
1							
2							
3							
4							
5							

It will be noted that in the table the positions named in Columns 2, 3, and 4 are in the median plane, the positions named in Columns 6 and 7 are in the horizontal plane, while the positions named in Columns 1 and 5 are in *both* planes. A comparison of the accuracy of judgment on stimuli in Columns 2, 3, and 4 with the accuracy on stimuli in Columns 6 and 7 should therefore give an indication of the plane in which sounds are more accurately localized. Stimuli in Columns 1 and 5 should not be considered in making the comparison, but the stimuli should be given at these locations when the experiment is conducted in order to present the subject with a greater variety of stimuli.

Questions:

- 1. Is the per cent of accuracy greatest in the median or the horizontal plane? .....
- 2. If many trials in each plane were given, in which plane would you expect to find the largest per cent of correct judgments? .....  
.....
- 3. Why might a sound directly in front be sometimes confused with one directly behind, while one directly at the left would seldom if ever be confused with one directly at the right?  
.....  
.....

SEC.

DIV.....SEAT No.....DATE.....NAME.....

## Chapter 12

### V. SELF-TESTING EXERCISE

Answer each of the questions below by drawing a circle around the *T* if you believe the statement is true and around the *F* if you believe the statement is false.

- |  |   |   |
|--|---|---|
| 1. The typical sense organ is an organ that is equally sensitive to all forms of energy.   | T | F |
| 2. An exteroceptor is a sense organ that yields information about conditions outside a person.   | T | F |
| 3. Pitch depends primarily on the frequency of the sound waves.  | T | F |
| 4. The sensitivity of the adult ear is increased considerably by training.   | T | F |
| 5. In the ability to detect differences in pitch, persons who are not deaf do not differ.  | T | F |
| 6. The unit of measurement for differences in loudness of sounds is the decibel.   | T | F |
| 7. The difference between red and yellow is primarily a difference in brightness.  | T | F |
| 8. Color-blindness occurs more frequently in women than in men.  | T | F |
| 9. A perimeter is an instrument used to measure the visual field.  | T | F |
| 10. An otherwise normal person could get along well with functional anaesthesia.   | T | F |
| 11. The kinaesthetic senses supply information about the external world.   | T | F |
| 12. In order to localize sounds well in the dark, one needs only one good ear.   | T | F |
| 13. The frequency limits of air vibrations per second which the human ear can detect are 16 and 30,000.  | T | F |
| 14. Testimony is likely to be more reliable when the witness reports an exciting event.  | T | F |
| 15. In general, when sense organs are stimulated by the same stimulus continuously, their sensitivity to that stimulus is decreased.                         | T | F |
| 16. When a person looks first at a blue light, then at a gray card, he sees a spot of yellow on the gray card. This is an example of a negative after-image. | T | F |
| 17. Perception involves sensation plus interpretation.   | T | F |
| 18. Usually when your visual image of one man is twice as large as the image of another, you see the first man as closer but not larger.                     | T | F |
| 19. We can judge visual depth or distance by means of retinal disparity.   | T | F |
| 20. Erroneous perceptions that are experienced by almost all persons are called illusions.   | T | F |

## *Chapter 12*

### VI. OPTIONAL ASSIGNMENTS

1. What is the importance of the Weber-Fechner Law and psychophysical methods in the development of experimental psychology? See H. E. Garrett, *Great Experiments in Psychology* (D. Appleton-Century Co., 1941), Chap. 15.

2. Summarize the findings regarding visual perception in industry and give a brief account of its significance. See Joseph Tiffin, *Industrial Psychology* (Prentice Hall Co., 1942), Chap. 6.

Chapter 13

Imagination: When and Why We Make Up Things  
in Our Imagination and Dreams

I. INTRODUCTION

IMAGINATION'' refers to the mental activity involved in rearranging recalled experiences into new combinations or patterns. Such activity is involved in make-believe games, play, dreams, story-telling, inventing, daydreams, and hallucinations. Hallucinations, which result from mistaking imaginary objects for perceptual ones, are to be distinguished from illusions, just as imagination is to be distinguished from perception. Your attention is directed to the following topics or problems: the rôle of imagination in adjustment and personality; the relation of imagination to play, daydreams, worry, and aesthetic enjoyment; the causes of hallucinations; kinds of dreams; the psychoanalytic interpretation of dreams; and the causes of dreams.

IIa. COLLATERAL READING

Guilford, J. P., *General Psychology*  
(D. Van Nostrand Company, Inc., 1939), Chap. 22.

IIb. ADDITIONAL READING ASSIGNMENTS

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.....

.....



## Chapter 13

### III. TERMINOLOGY

Enter below the best synonym or brief definition for each of the following terms:

1. imagination .....
2. hallucination .....
3. eidetic images .....
4. reproductive imagination .....
5. creative imagination .....
6. worry .....
7. hypochondria .....
8. ambivalence of desires .....
9. play .....
10. delusions .....
11. premonitory dreams .....
12. dreams of levitation .....
13. imagery types .....
14. kinaesthetic imagery .....
15. compensatory daydreams .....
16. prodromic dreams .....
17. aesthetic enjoyment .....

SEC.

Div.....SEAT No.....DATE.....NAME.....

## Chapter 13

### IVa. OUTSIDE ASSIGNMENT: *Imagination*

The purpose of this assignment is to demonstrate the use of ink blots as a means of investigating individual differences in imagination.

1. Make an ink blot. To do this, drop a fairly large drop of ink on a sheet of plain white paper ( $8\frac{1}{2} \times 11$ ). Fold the paper in such a way that the crease goes through the drop of ink and press the two parts of the page together firmly. Then open the page and let the ink blot dry.

2. Present this ink blot to ten of your associates, five girls and five boys. Say to each subject: "I want you to tell me what things you see in this ink blot. There is really no picture in the ink blot, but I want to see whether your imagination will suggest pictures of things seen in it." Urge each subject to name all of the things which he can see. Record each response.

3. Answer the following questions:

a. How many different responses were made by each subject? Answer by filling in the following table:

TABLE XXVI  
NUMBER OF THINGS SEEN IN THE INK BLOT  
BY EACH SUBJECT

<i>Subject</i>	<i>Sex</i>	<i>Number</i>
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
Total		

b. What is the average number of things seen by all subjects? ..... By the boys? ..... By the girls? .....

- c. Is there any indication of a sex difference in imagination? Consider both the averages which you have just recorded and the responses themselves.
- d. List the five things most frequently seen, and indicate the number of subjects seeing each.

<i>Things Seen</i>	<i>Number Seeing It</i>
.....	.....
.....	.....
.....	.....
.....	.....
.....	.....

- e. Which of your subjects seemed to have the most fertile imagination? .....
- Why do you think this subject has the most fertile imagination? .....
- .....
- .....
- .....
- .....

- f. Turn in your ink blot and list here the names of your subjects:

1. ....
2. ....
3. ....
4. ....
5. ....
6. ....
7. ....
8. ....
9. ....
10. ....

SEC.

DIV.....SEAT No.....DATE.....NAME.....

## Chapter 13

### IVb. CLASS EXERCISE: *Individual Differences in Imagination*

This exercise is an adaptation of an experiment in Langfeld and Allport's *An Elementary Laboratory Course in Psychology*. The purpose of this exercise is to determine the degree of vividness of certain imaginal experiences.

1. *Directions:* Try to imagine yourself having each of the experiences listed on this page and the next. Estimate the vividness of each experience as you bring it up in your imagination on a five-point scale in which 1 stands for no image at all, 2 stands for a faint image, 3 for a distinct image, 4 for a vivid image, and 5 for an image as vivid as if the object were present. Experiences for eight sense fields are listed. Rate the experiences in one sense field before going to the next one. Simply write a number from 1 to 5 after each experience to indicate vividness as you try to imagine yourself having it.

#### a. Visual

- (1) Seeing your mother's face (.....)
- (2) Seeing your bedroom as you enter (.....)
- (3) A red rose (.....)
- (4) A railroad engine (.....)
- Average (.....)

#### b. Auditory

- (1) An airplane motor (.....)
- (2) A pistol shot (.....)
- (3) A church organ (.....)
- (4) Your father's voice (.....)
- Average (.....)

#### c. Olfactory

- (1) The smell of paint (.....)
- (2) The smell of decaying fish (.....)
- (3) The smell of pine (.....)
- (4) The smell of Easter lilies (.....)
- Average (.....)

#### d. Gustatory

- (1) The taste of oranges (.....)
- (2) The taste of candy (.....)
- (3) The taste of beefsteak (.....)
- (4) The taste of onions (.....)
- Average (.....)

#### e. Touch

- (1) The feel of sandpaper (.....)
- (2) The feel of cotton (.....)
- (3) The feel of a sharp knife (.....)
- (4) The feel of glass (.....)
- Average (.....)

#### f. Pain

- (1) A pin prick (.....)
- (2) A toothache (.....)
- (3) A splinter under a fingernail (.....)
- (4) A burn (.....)
- Average (.....)

g. *Temperature*

- (1) Ice in the mouth (.....)  
 (2) Cool, wet cloth on your forehead (.....)  
 (3) Heat from a stove (.....)  
 (4) Warm water in the mouth (.....)

Average (.....)

h. *Kinaesthetic* (muscular strain or pull)

- (1) Clinching fists tightly (.....)  
 (2) Doing "push ups" in gym class (.....)  
 (3) Throwing (.....)  
 (4) Walking backwards (.....)

Average (.....)

2. Calculate the average degree of vividness of the four experiences in each sense field and write this average in the space provided.

3. List the eight sense fields below in order of these averages, placing the one with the highest average first, etc. If two or more averages are the same, break the tie by deciding in which field you generally have the more vivid imagery.

.....	.....
.....	.....
.....	.....
.....	.....

4. Record the results for the class in Table XXVII under the direction of your instructor.

TABLE XXVII  
 NUMBER AND PER CENT OF STUDENTS RANKING  
 EACH SENSE FIELD FIRST

<i>Sense</i>	<i>Number First</i>	<i>Per Cent First</i>
Visual		
Auditory		
Olfactory		
Gustatory		
Touch		
Pain		
Temperature		
Kinaesthetic		

5. Interpret the results shown in the table.

SEC.

DIV.....SEAT No.....DATE.....NAME.....

## Chapter 13

### V. SELF-TESTING EXERCISE

Answer each of the questions below by drawing a circle around the *T* if you believe the statement is true and around the *F* if you believe the statement is false.

- |  |   |   |
|--|---|---|
| 1. Daydreaming is a form of imagination.   | T | F |
| 2. Daydreams often serve as outlets for motives that do not find expression in any real accomplishment.                                      | T | F |
| 3. The psychoanalytic theory has exaggerated the importance of fear as a cause of dreams.  | T | F |
| 4. The more one has to do with concrete things, the less vivid is his imagery.   | T | F |
| 5. Men of science experience more vivid imagery than men in general.   | T | F |
| 6. The elements of imaginary objects are all drawn from previous experiences.  | T | F |
| 7. Powerful emotions may cause one to mistake an imaginary object for a perceptual one.  | T | F |
| 8. An activity that has been brought to a satisfactory conclusion during the day is likely to reappear the following night in a dream.       | T | F |
| 9. A dream is apt to rehearse the most successful activities of the preceding day.   | T | F |
| 10. Excessive daydreaming is an introvert characteristic.  | T | F |
| 11. The goal of imagination is reached when different past experiences are brought together and rearranged to form new psychological wholes. | T | F |
| 12. Art makes no appeal to the intellect, being rather a matter of feeling and emotion.  | T | F |
| 13. Daydreaming is undesirable to the extent that it becomes a substitute for action.  | T | F |
| 14. Mild worries, like mild forms of fear, are frequently enjoyable.   | T | F |
| 15. Fairy stories and scientific hypotheses are examples of reproductive imagination.  | T | F |
| 16. Rich and varied imagination depends primarily upon the amount of practice one has in rearranging facts into new patterns.                | T | F |
| 17. Dreams are regarded as a source of information about certain aspects of a dreamer's personality.   | T | F |
| 18. Most individuals have only one type of imagery.  | T | F |
| 19. According to the psychoanalysts, all dreaming is the result of external stimuli or physiological conditions.                             | T | F |
| 20. A person who mistakes an imaginary object for a real one is experiencing an illusion.  | T | F |

## Chapter 13

### VI. OPTIONAL ASSIGNMENTS

1. Discuss the rôle of imagination in dreams in relation to psychoanalytic concepts as covered by L. F. Shaffer, *Psychology of Adjustment* (Houghton Mifflin Co., 1936), Chap. 14.
2. Discuss the rôle of make-believe, fantasies, and other imaginative activities in a child's mental life. See A. J. Jersild, *Child Psychology* (rev. ed., Prentice Hall Co., 1940), Chap. 12, and N. L. Munn, *Psychological Development* (Houghton Mifflin Co., 1938), Chap. 11.

SEC.

DIV.....SEAT No.....DATE.....NAME.....

## Chapter 14

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### Reasoning: How We Make, or Should Make, Our Decisions

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#### I. INTRODUCTION

REASONING, as a mental process, has been analyzed and found to consist of various more elementary processes of perception and association. In the solution of many problems, trial and error, on the mental level, as opposed to trial and error in overt activity, has been found to characterize the reasoning process.

Frequently what passes for true reasoning is found, upon analysis, to be basically rationalization.

The purposes of the projects included with this assignment are to give the student some experiments in differentiating between reasoning and rationalization and to show the presence of trial-and-error activity on the mental level in the solution of a certain type of problem.

#### IIa. COLLATERAL READING

Valentine, W. L., *Experimental Foundations of General Psychology*  
(rev. ed., Farrar and Rinehart, 1941), Chap. 19.

#### IIb. ADDITIONAL READING ASSIGNMENTS

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## *Chapter 14*

### III. TERMINOLOGY

Enter below the best synonym or brief definition for each of the following terms:

1. reasoning .....
2. rationalization .....
3. criterion .....
4. obsession .....
5. abulia .....
6. hypothesis .....
7. induction .....
8. verification .....
9. deduction .....
10. cause .....
11. concept .....
12. autistic thinking .....
13. paranoia .....

Chapter 14

IVa. OUTSIDE ASSIGNMENT: *True Reasoning vs. Rationalization*  
Select some activity of yourself or another person where the reasons given for the action are probably *not* true reasons. Briefly state the activity below.

.....

.....

.....

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.....

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What were the reasons given?

1. ....

.....

.....

2. ....

.....

.....

3. ....

.....

.....

What were the *real* reasons?

1. ....

.....

.....

2. ....

.....

.....

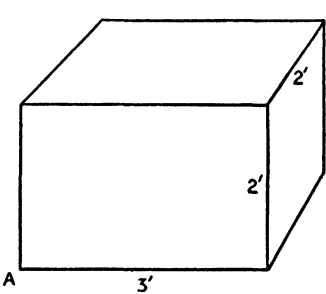
3. ....

.....

.....

Chapter 14

IVb. CLASS EXERCISE: *Mental Trial and Error vs. Reasoning*



Suppose an ant is at point A on the outside of the box above. In order to crawl to point B by the shortest possible route,

- 1. What should be the line of travel?
- 2. What distance will the ant travel?
- 3. In solving the problem, what mental trials did you make before reaching the correct solution?

a. ....  
.....  
.....  
.....  
.....

b. ....  
.....  
.....  
.....  
.....

- c. ....
- .....
- .....
- .....
- .....
- d. ....
- .....
- .....
- .....
- .....
- e. ....
- .....
- .....
- .....
- .....

SEC.

Div.....SEAT No.....DATE.....NAME.....

## Chapter 14

### V. SELF-TESTING EXERCISE

Answer each of the questions below by drawing a circle around the *T* if you believe the statement is true and around the *F* if you believe the statement is false.

- |   |   |   |
|---|---|---|
| 1. When a person reasons, he uses his knowledge to solve problems.  | T | F |
| 2. We might assume that a person is reasoning if he attacks a problem in hit-or-miss fashion.   | T | F |
| 3. When one rationalizes, he strives to understand the true causes of his behavior.   | T | F |
| 4. In general, it is desirable for a man to reason before every action.   | T | F |
| 5. Reasoning and rationalization are the same.  | T | F |
| 6. A hypothesis is a tentative solution.  | T | F |
| 7. In the reasoning process, a hypothesis must be verified.   | T | F |
| 8. The process of arriving at a particular application or consequence from a generalized statement of fact is called induction.   | T | F |
| 9. The process of reasoning from particular instances to a generalization is called deduction.  | T | F |
| 10. If a person with keen reasoning ability begins with false premises, the outcome of his reasoning will be false.   | T | F |
| 11. Of the various ways of arriving at a conclusion, reasoning is the one that eliminates the need for experiment.  | T | F |
| 12. The use of conjunctions such as <i>although</i> , or <i>in spite of</i> which imply exceptions to general rules, is usually mastered by children at about ten years of age. | T | F |
| 13. A person's idea of a thing, or what a thing means to him, is called a concept.  | T | F |
| 14. An image is a reproduction of an object previously experienced.   | T | F |
| 15. Autistic thinking is thinking that disregards logical principles or confirmation by the facts.  | T | F |
| 16. Language is important as a tool of thinking.  | T | F |
| 17. Thinking is stimulated by satisfactory traditions and habits.   | T | F |
| 18. We reason more effectively when we feel strongly on a matter.   | T | F |
| 19. Much information about a problem inhibits reasoning.  | T | F |
| 20. A false belief that is strongly held is called a delusion.  | T | F |

## Chapter 14

### VI. OPTIONAL ASSIGNMENTS

1. Discuss and contrast the rôles of perception, learning, and reasoning in the behavior of animals. See H. E. Garrett, *Great Experiments in Psychology* (rev. ed., D. Appleton-Century Co., 1941), Chap. 7.

2. Discuss and explain disorders of reasoning as described by J. J. B. Morgan, *The Psychology of Abnormal People* (rev. ed., Longmans, Green Co., 1936), Chap. 5.

## Chapter 15

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### Speaking, Reading, and Writing: How We Express Ourselves

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#### I. INTRODUCTION

NUMEROUS standardized tests have been developed for the measurement of various functions in speaking, reading, and writing. Poor or retarded reading has been found to be due to a variety of causes. It is one of the major jobs of the reading clinician to discover in each case the particular cause or causes of deficiency or retardation.

The purposes of this project are to acquaint the student with *one* of the diagnostic tools used by the remedial reading clinician and to illustrate a simple test by means of which the rate of reading can be determined with the element of comprehension held constant.

#### IIa. COLLATERAL READING

Dashiell, J. F., *Fundamentals of General Psychology*  
(Houghton Mifflin Company, 1937), Chap. 18.

#### IIb. ADDITIONAL READING ASSIGNMENTS

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## Chapter 15

### III. TERMINOLOGY

Enter below the best synonym or brief definition for each of the following terms:

1. motor aphasia .....
2. therapy .....
3. neurophysiological .....
4. comprehension .....
5. lateral imbalance .....
6. vertical imbalance .....
7. phonics .....
8. regression .....
9. flash cards .....
10. word reader .....
11. scanning .....
12. reading rate .....
13. fixation .....
14. handwriting scale .....

SEC.

DIV.....SEAT NO.....DATE.....NAME.....

## Chapter 15

### IVa. OUTSIDE ASSIGNMENT: *Test of Phonic Ability*<sup>1</sup>

*Directions:* This is a test to find out if you can follow certain principles of pronunciation. Select the best of the four pronunciation choices given for each of the nonsense words and write its number in the space at the end of the line. You do not need actually to know rules in order to arrive at the correct response. Think of actual words similar to the nonsense words and compare their pronunciation with possible pronunciations of the nonsense words. For example, "meck" makes one think of neck, speck, Jack, pack, cracker, etc. Thus the *ck* of "meck" will have the *k* sound and the pronunciation will be "mek." Be careful to choose the pronunciation that would be most likely to be used. *Remember that the four pronunciation choices are sounded according to the symbols below.* Refer to these symbols as much as you need to. Note that the absence of a mark above a vowel indicates a short sound.

ā	as in Kate or made
a	as in cat or sad
ä	as in father or arm
ē	as in be or zero
e	as in Ted or egg
ow	as in cow or how
oi	as in soil or loiter
ī	as in ice or knife
i	as in pit or it
ō	as in no or code
oo	as in smooth or boot
ū	as in use or few
u	as in under or the a in sofa

#### EXAMPLES

baker	1. bākrē	2. bākūr	3. baker	4. bakru.....	( 2 )
noise	1. nois	2. nōis	3. nīs	4. nōsē.....	( 1 )
bat	1. bāt	2. bat	3. bāt.....		( 2 )
college	1. kālēg	2. kōlij	3. kōlig	4. kälīj.....	( 4 )
1. histen	1. histen	2. histun	3. hisun	4. histēn.....	( )
2. noistle	1. noisul	2. noistul	3. noistōl	4. nōstul.....	( )
3. pnum	1. punum	2. pinum	3. punoom	4. num.....	( )
4. panciate	1. pansiat	2. panzēāt	3. panshēāt	4. pancēut.....	( )
5. stilo	1. stīlō	2. stīloo	3. stīlu	4. stilā.....	( )
6. muntēn	1. muntun	2. mūntōn	3. mūntun	4. munun.....	( )
7. psot	1. sāt	2. pusat	3. pusot	4. soit.....	( )
8. vaiper	1. vapur	2. vīpur	3. vāpur	4. vāipur.....	( )
9. equidum	1. ēkwudum	2. ekūdum	3. ekudum	4. ekwīdum.....	( )

<sup>1</sup> This test was developed by M. V. Rogers, and is reprinted, by permission of the author and journal, from the *Journal of Experimental Education*, VI (1938), 381-395.

10. diasem	1. diuzem 2. dīusem 3. dēusem 4. diasem.....	( )
11. gupitis	1. gupētus 2. gūpitus 3. gupitīs 4. gūpītus.....	( )
12. conpud	1. cōnpud 2. cōnpūd 3. cānpud 4. cōnpood.....	( )
13. dexagogue	1. deksōgu 2. deksgāgū 3. deksgāg 4. deksgāgoo.....	( )
14. tamu	1. tāmu 2. tāmū 3. tamā 4. tāmoo.....	( )
15. ubidge	1. ubij 2. ūbij 3. ubīj 4. ubidgu.....	( )
16. dapu	1. dāpū 2. dapoo 3. dāpoo 4. dāpu.....	( )
17. ruker	1. rūker 2. rūkur 3. rookur 4. rūur.....	( )
18. bicture	1. bikchur 2. bischur 3. biktur 4. biktur.....	( )
19. pasphim	1. paspim 2. pāspim 3. pashim 4. pasīm.....	( )
20. archemp	1. arkemp 2. archemp 3. arkhemp 4. archēmp.....	( )
21. dacial	1. dasēul 2. dāshul 3. dāsēul 4. dākiul.....	( )
22. abneous	1. ābnēōs 2. abniōus 3. abnius 4. abnus.....	( )
23. elier	1. elēur 2. ēlēur 3. elur 4. ēlyur.....	( )
24. juve	1. jūv 2. joov 3. jūvu 4. jūf.....	( )
25. regic	1. regik 2. rēgik 3. regis 4. rejik.....	( )
26. sublogue	1. sublāgoo 2. sublāgu 3. sublōgū 4. sublāg.....	( )
27. safu	1. safoo 2. sāfoo 3. sāfu 4. sāfū.....	( )
28. archpuk	1. arkpuk 2. archpuk 3. arkhupuk 4. arkpūk.....	( )
29. ticious	1. tisēus 2. tikus 3. tishus 4. tikēus.....	( )
30. gasion	1. gāzhun 2. gāshēun 3. gashun 4. gasēun.....	( )
31. feunter	1. funtur 2. fūntur 3. fēuntur 4. fūnter.....	( )
32. wrogg	1. wurāg 2. wurōg 3. rāg 4. wāg.....	( )
33. aption	1. aptēun 2. aptun 3. apshēun 4. apshun.....	( )
34. gham	1. gam 2. ham 3. guham 4. guhām.....	( )
35. salf	1. sālf 2. sāl 3. sāl 4. salf.....	( )
36. rhambuf	1. rambuf 2. ruhambuf 3. ambuf 4. hambuf.....	( )
37. bential	1. benschul 2. benschēul 3. benzbul 4. bentēul.....	( )
38. palt	1. pāt 2. pālt 3. pāl 4. pāt.....	( )
39. bisuape	1. bīsāp 2. bisāp 3. bīsooāp 4. bīsāwāp.....	( )
40. tamtious	1. tamshēus 2. tamtēus 3. tamtius 4. tamshus.....	( )
41. knad	1. nad 2. ku-nād 3. kunād 4. kād.....	( )
42. hinrious	1. hinrēōs 2. hinrus 3. hinrius 4. hinrūs.....	( )
43. teigh	1. tīg 2. tēg 3. tē 4. tā.....	( )
44. bricle	1. briclē 2. bricul 3. briclē 4. briclu.....	( )
45. smuoth	1. smūth 2. smoot 3. smūāth 4. smōth.....	( )
46. kough	1. kōg 2. kowg 3. kow 4. kuf.....	( )
47. moith	1. moith 2. mōith 3. māth 4. mōth.....	( )
48. gudge	1. guju 2. guj 3. gūju 4. gudgu.....	( )
49. ackbility	1. akbiluti 2. akbiluti 3. akbiliti.....	( )
50. ramb	1. ramb 2. ram 3. rambu 4. rāmb.....	( )
51. pogn	1. pōn 2. pōgun 3. pōg 4. pāg.....	( )
52. lasque	1. laskū 2. lasku 3. lāskwu 4. lask.....	( )
53. pactuate	1. paktūāt 2. pastūāt 3. paktūt 4. pakchooāt.....	( )
54. duscious	1. dusēus 2. duskēus 3. dusus 4. dushus.....	( )
55. dascut	1. dasut 2. dasoot 3. daskut 4. dāsūt.....	( )
56. nace	1. nāk 2. nās 3. nak 4. nāsu.....	( )
57. koge	1. kōgu 2. kōg 3. kōj 4. kāg.....	( )
58. guigweb	1. gīgeb 2. gwīgweb 3. gūiweb 4. gīgweb.....	( )
59. nisriate	1. nistrēātu 2. nistrāt 3. nistrut 4. nistrēāt.....	( )
60. gregaf	1. greguf 2. jreguf 3. grējuf 4. jregaf.....	( )
61. cymtur	1. simtur 2. kīmtur 3. kimtur 4. kimtūr.....	( )
62. cavcip	1. kafkup 2. kavkip 3. savkip 4. kavsip.....	( )

63. reccit	1. rekut 2. reksut 3. rēkut 4. rekit.....	( )
64. drate	1. drāt 2. drat 3. drāt 4. drātu.....	( )
65. gagus	1. gājus 2. jāgus 3. gāgus 4. gajus.....	( )
66. plif	1. plif 2. pluf 3. plēf 4. plif.....	( )
67. poaf	1. pāf 2. pōf 3. pāf 4. paf.....	( )
68. fowper	1. fowpur 2. fōpur 3. fāpur 4. fōpēr.....	( )
69. kutch	1. kut 2. kutchu 3. kucht 4. kuch.....	( )
70. baccum	1. bakum 2. baksum 3. baksūm 4. bāksum.....	( )
71. trign	1. trīn 2. trin 3. trig 4. trigun.....	( )
72. mogue	1. mōgū 2. mōg 3. mägū 4. magu.....	( )
73. balghat	1. balgut 2. balhut 3. balguhut 4. bālut.....	( )
74. maccet	1. makut 2. mākut 3. masut 4. maksut.....	( )
75. nevsure	1. nevsūr 2. nevshur 3. nevsur 4. nēvsūr.....	( )
76. callion	1. kalēun 2. kalēon 3. kalun 4. kalyun.....	( )
77. bamsion	1. bamsēun 2. bāmsēun 3. bāmsun 4. bamshun.....	( )
78. pudim	1. pudum 2. pūdum 3. pudēm 4. pādum.....	( )
79. datiate	1. dāshēāt 2. dātēāt 3. dāshēāt 4. dātēāt.....	( )
80. quim	1. kwim 2. kūim 3. kim 4. kūm.....	( )
81. bajkile	1. bajkilu 2. bajkulē 3. bajkil 4. bajkul.....	( )
82. obtur	1. ābtur 2. ōbtur 3. ōbtūr 4. ubtur.....	( )
83. noyten	1. noitun 2. nōtun 3. nōiyun 4. nāten.....	( )
84. taysen	1. tasun 2. tyāsun 3. tāsun 4. tāsun.....	( )
85. vapdow	1. vāpdow 2. vapdow 3. vapdō 4. vapdu.....	( )
86. kligh	1. klīg 2. kligh 3. kli 4. klī.....	( )
87. ulfug	1. ūlfug 2. ūlfūg 3. ulfug 4. ufug.....	( )
88. eaput	1. ēput 2. āput 3. āpūt 4. ēāput.....	( )
89. cageau	1. cagu 2. cājēoo 3. cājē 4. cājō.....	( )
90. hien	1. hiun 2. hīen 3. hīn 4. hēn.....	( )
91. praut	1. prowt 2. proot 3. prāt 4. prāut.....	( )
92. tawjum	1. towjum 2. tājum 3. tājum 4. tajum.....	( )
93. bennion	1. bēniun 2. beniun 3. benun 4. benyun.....	( )
94. raniel	1. rānul 2. rāniul 3. rāniāl 4. ranul.....	( )
95. milous	1. milōs 2. milus 3. milōus 4. mileus.....	( )
96. vouke	1. vōk 2. vowk 3. vuk 4. vūk.....	( )
97. malantive	1. mulantiv 2. mūlantiv 3. mūlantēv 4. mūlantiv.....	( )
98. canberize	1. canberēz 2. canbēriz 3. canbriz 4. canbēriz.....	( )
99. laffut	1. lāfūt 2. lafut 3. lāfoot 4. lafut.....	( )
100. gheej	1. gēj 2. gej 3. geuj 4. hej.....	( )

1. The key to the Test of Phonic Ability will be read by the instructor. Score your paper, and then return to the test and study the items on which you made errors. By means of the key see if you can determine some of the phonic principles that would have enabled you to pronounce correctly the nonsense words that you missed. State briefly in the space below as many of these principles as you can formulate.

2. Your instructor will appoint one or two tellers to collect the scores and to calculate norms for the class. The tellers will report the range of scores (lowest score and highest score), the median score, and, if time permits, the decile norms for the class. How does your score compare with others in the class?

SEC.

DIV.....SEAT No.....DATE.....NAME.....

## Chapter 15

### IVb. CLASS EXERCISE: *A Reading Test*

The instructor will pass out sheets containing a passage entitled, "What is a good voice?" This passage should be read according to instructions you will receive. After the material has been read and marked as indicated, the reading test is scored as follows:

The score is the number of seconds required to read the passage

+ 100 for each omission

+ 50 for each wrong answer

The score thus obtained may be interpreted in comparison with scores made by other college students by means of the following percentile conversion table.

TABLE XXVIII  
PERCENTILE CONVERSION TABLE

<i>Raw Score</i>	<i>Percentile</i>	<i>Raw Score</i>	<i>Percentile</i>
75	100	260	40
155	95	265	30
180	90	310	20
190	80	350	10
220	70	400	5
225	60	600	1
240	50		



SEC.

DIV.....SEAT No.....DATE.....NAME.....

## Chapter 15

### V. SELF-TESTING EXERCISE

Answer each of the questions below by drawing a circle around the *T* if you believe the statement is true and around the *F* if you believe the statement is false.

- |   |   |   |
|---|---|---|
| 1. Learning a language depends primarily upon forming associations between words and objects or relationships.                          | T | F |
| 2. Children learn only about 100 words before they are four.  | T | F |
| 3. The language stimulation provided by a child's environment is the only important factor in vocabulary growth.                        | T | F |
| 4. In comparison with that of other children, the vocabulary of children brought up by deaf-mute parents would probably be inferior.    | T | F |
| 5. A person's speech reveals his emotional and attitudinal states through his voice as well as by what he says.                         | T | F |
| 6. Motor aphasia is a condition involving poor training in use of words.  | T | F |
| 7. Most stutterers have anatomical defects of the vocal organs.   | T | F |
| 8. Psychologically well-trained speech correctionists can cure any stutterer.   | T | F |
| 9. The number of people in the United States with speech defects is about one in 1000.  | T | F |
| 10. Most defects of speech are not due to abnormalities of the speech organs.   | T | F |
| 11. The reading of short sentences should be introduced before habits of reading by words are firmly established.                       | T | F |
| 12. Investigations have shown that children in the sixth grade differ widely in reading ability.  | T | F |
| 13. Reading tests are devised to measure clearness of vision.   | T | F |
| 14. Reading disability may be due to any one of several causes.   | T | F |
| 15. Phonics deal with the way in which combinations of letters are pronounced.  | T | F |
| 16. Faulty eye movements in reading are sometimes a symptom of reading disability.  | T | F |
| 17. The treatment for a reading disability should be individualized.  | T | F |
| 18. If a pupil is permitted to practice his handwriting without direction, he will probably become perfect if he practices long enough. | T | F |
| 19. When learning to write, the child should use whichever hand he prefers.   | T | F |
| 20. Investigations of spelling indicate that the difficulty of words depends almost entirely upon their length.                         | T | F |



## Chapter 15

### VI. OPTIONAL ASSIGNMENTS

1. Summarize the several major factors causing reading retardation as discussed by E. A. Betts, *The Prevention and Correction of Reading Difficulties* (Row, Peterson, & Co., 1936), Chap. 5.
2. Discuss the development of spoken and written language habits in children. See A. T. Jersild, *Child Psychology* (rev. ed., Prentice Hall Co., 1940), Chap. 5.

TABULATION SHEET

No.....

Data.....

Group or Class.....

Score or Interval	Tabulation	f	d	fd	fd²
			21		
			20		
			19		
			18		
			17		
			16		
			15		
			14		
			13		
			12		
			11		
			10		
			9		
			8		
			7		
			6		
			5		
			4		
			3		
			2		
			1		
			0		
Summations					



TABULATION SHEET

No.....

Data.....

Group or Class.....

Score or Interval	Tabulation	f	d	fd	fd²
			21		
			20		
			19		
			18		
			17		
			16		
			15		
			14		
			13		
			12		
			11		
			10		
			9		
			8		
			7		
			6		
			5		
			4		
			3		
			2		
			1		
			0		
Summations					



# TABULATION SHEET

No.....

Data.....

Group or Class.....

<i>Score or Interval</i>	<i>Tabulation</i>	<i>f</i>	<i>d</i>	<i>fd</i>	<i>fd<sup>2</sup></i>
			21		
			20		
			19		
			18		
			17		
			16		
			15		
			14		
			13		
			12		
			11		
			10		
			9		
			8		
			7		
			6		
			5		
			4		
			3		
			2		
			1		
			0		
<i>Summations</i>					



















